Sensing: The elephant in the room of management learning

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ABSTRACT

This paper examines sensing as the overlooked dimension of management learning and argues that it is an essential component of the way we construe knowledge. Despite recent efforts to validate the role of sensing in practice-based learning, it has not been widely considered in the management literature. Hence, management educators may not be well-equipped to assist analytically-minded learners in recognizing sensory inputs and integrating them effectively with intellectual knowing. The purpose of this paper is twofold: 1) to highlight the essential role of sensing in management learning and organizational performance, and 2) to help educators gain a deeper understanding of analytically-minded learners’ resistance to it, as well as provide appropriate language for addressing it. Drawing on our experience from the corporate and university classroom, corroborated by the literature, we have identified several common causes of resistance to sensing in management learning and discuss how to approach them: preference for sequential reasoning style, lack of sensory awareness, inadequate vocabulary for sensory experiences, dismissive attitude, discomfort of learning outside of the comfort zone, and social norms against non-analytical approaches in the corporate world.

Keywords: sensory-based learning, sensing, management learning, sensible knowledge
INTRODUCTION

“Sensations fill the space between cognition and emotions, and energize learning”

(Antonacopoulou and Gabriel, 2001)

Recent management research suggests that we come to know what we know through the body and its senses (Antonacopoulou, 2019; de Rond et al., 2019; Panayiotou, 2017; Strati, 2007). This frames learning as a sensory-based process that results in knowledge which incorporates sensory inputs as sources of information. To encapsulate this thinking, Antonio Strati introduced the notion of sensible knowledge as a form of knowing that is perceived, judged, produced, and reproduced through the senses (Panayiotou, 2017; Strati, 2007). It is foremost through the perceptive-sensory means that we interpret behavior of others and connect with them. Quite possibly, all of our perceptions arise through physical, sensuous and affective experiences that allow us to make sense of the world (Merleau-Ponty, 1962). This suggests that ‘sensuous and affective states are not accompanying phenomena’ but rather ‘have an indispensable role in structuring our experience’ (Essén and Värlander, 2012: 400).

Such shift in the understanding how knowledge is construed has a profound effect on the way learning is facilitated. So far, management learning has focused mostly on intellectual activities (Strati, 2007: 65), with little attention paid to sensing explicitly. Hence, management educators may not be well-equipped to assist analytically-trained, analytically-minded learners in recognizing and processing sensory inputs alongside intellectualization. Since managers and organizations could benefit from tapping into both sensory and intellectual aspects of learning (Weick, 2007), we call for openly acknowledging sensing - a metaphorical elephant in the room of management learning - as an integral component of the learning experience. The purpose of this paper is twofold: 1) to highlight the essential role of sensing in management learning and organizational performance, and 2) to help educators gain a deeper understanding of analytically-
mindful learners’ resistance to it, as well as provide appropriate language for addressing it. Our goal is to bring the discussion about the role of sensing into the mainstream of management learning, rather than relegating it to a specialty, so that it can be properly explored and facilitated. As the first step, drawing on our own experience from the classroom corroborated by the literature, we identify common barriers to sensory receptivity and discuss how to approach them.

Strati makes the case that learning in organizations, including management learning, is rooted in sensible knowledge, i.e., knowledge acquired through the perceptive-sensory experience and aesthetic judgment (Strati, 2007). Yet, sensory-based learning, albeit common in early childhood, disabilities, and arts education (Blomert and Froyen, 2010; Pagliano, 2012; Thomson, 2015; Worthen, 2010), seems to be under-represented in mainstream adult learning. In view of a recent neuroscience finding suggesting that ‘newly acquired sensory information can have profound effects on performance’ (Nagel et al., 2005: R25), not attending to engaging senses presents a missed opportunity to deepen knowledge and thus improve performance. Knowledge obtained through the senses, contrary to intellectual knowledge produced by means acceptable in an academic setting, is rarely considered evidence in the scientific community (Panayiototou, 2017) or in the corporate world (Taylor, 2002: 827). We argue that both types of knowledge serve an important purpose, which is why they should be combined in a complementary fashion and used differentially, depending on the demands of the context (Weick, 2007). So far, the potential of human physicality as a source of information has been largely ignored by management (Brewis and Williams, 2019; Moore, 2017). As a result, analytically-trained managers unaware of their sensory perceptions may miss out on important information, or be unaware how their unconscious sensations or feelings affect their decisions and overall effectiveness. Sensing is a
useful and often untapped resource that can complement intellectual knowing in today’s volatile, uncertain, complex, and ambiguous environment (Stiehm and Townsend, 2002), as there is a growing need for more flexibility and adaptability which enables managers to deal with novel, unexpected situations that do not allow for a comprehensive analysis (McDonald and Tang, 2014; Schlitz et al., 2011).

However, a wide acceptance of such expanded understanding of knowledge requires a concerted effort. Even if organizations begin encouraging managers to take sensory-based information seriously, it is presumptuous to expect that managers will easily do so. Intentionally paying attention to sensations may not come naturally to those who are more accustomed to intellectual assessment. Drawing on senses for enhanced learning and performance involves visceral, non-verbal and pre-verbal experiencing, allowing for knowledge acquisition through direct physical, sensory, and affective experience (McKeen et al., 2018). Overcoming ’mentalization’ (Strati, 2007) of management learning will require training.

A simple encouragement may not be enough to help analytically-minded learners feel comfortable with sensing, as it became apparent to us when teaching intuition to highly skilled managers and professionals. Intuition often contains a sensory component that has been long recognized by practitioners but did not catch attention of management researchers until recently (Bas et al., 2019; Dörrler and Bas, 2020a). What we noticed in our classes was a varying level of resistance to sensory-based elements of learning for a number of reasons that we discuss in detail later. We realized that this resistance is not unique to intuition, but rather, a result of learners’ reluctance and lack of training in using sensing consciously. This is why we decided to explore the way sensing can be effectively incorporated into management learning. Sensing has been ‘creeping’ into the classroom for some time as educators started using art, metaphors,
literature/poetry, and theater to facilitate management learning (Beirne and Knight, 2007; Taylor and Ladkin, 2009). This suggests that others must be encountering the same resistance that we did, and as we have found in the literature. What this paper offers, is a deeper understanding of possible stumbling blocks to sensing that seem to be common among analytically-minded thinkers. It also provides the language for educators to use when their teaching involves sensory engagement. Our paper makes a theoretical contribution to the debate about the role of sensing in management learning, by acknowledging it as the elephant in the room, and encouraging openness and transparency around it so that sensing can be incorporated into mainstream learning models. Our practical contribution is in helping educators understand why analytically-minded thinkers may be resistant to sensory-based learning, and offering suggestions how they can help learners overcome this resistance.

Our timing is opportune, as a conversation has emerged in management learning about the role of sensing, as illustrated by a 2017 virtual special issue on the topic, Sensory Knowledge in Management Learning (https://journals.sagepub.com/page/mlq/collections/virtual-special-issues/sensory_knowledge), and the upcoming special issue, The Senses in Management Research and Education (https://journals.sagepub.com/pb-assets/cmscontent/MLQ/Cf%20The%20Senses.pdf).

SENSING IN MANAGEMENT LEARNING

Most of the skills required for managers these days are well beyond the scope of explicitly articulated job-specific technical competencies (Panayiotou, 2017). Elena Antonacopoulou (2019) suggests that new insights are born when sensations, as much as ideas and emotions, drive action. This action shapes one’s practice that involves a skillful navigation of complex
environments, aided by ‘sensory embodied ways of knowing’ (Pink, 2011: 345). Although it is the body that enables both intellectual ratiocination and sensible knowledge, it appears that the important role of the body has not been widely acknowledged (Strati, 2007). In fact, the literature demonstrates the opposite: reluctance and embarrassment of admitting the use of approaches other than linear reasoning (Agor, 1984; 1989: 247), and creating misleading alternative accounts for arriving at a solution (Dörfler and Eden, 2019). In our experience teaching managers in corporate and academic environments, we have observed a frequent lack of openness to the sensory aspects of learning by analytically-minded thinkers. Yet, the initial (and occasionally ongoing) resistance to openly engage senses is not commonly discussed.

Overlooking sensing may leave managers paralyzed in cases of unknowable uncertainty, where additional analysis does not yield additional actionable information (Dörfler and Bas, 2020b). As Polányi put it, ‘Nothing that ought to be, can be determined by knowing what is’ (Polányi, 1966: 44). Sensory-based visceral and emotional reactions facilitate the creation of a ‘from-the-body’ narrative (de Rond et al., 2019: 1962) that enables individuals to move forward amidst uncertainty (Cunliffe and Coupland, 2012; de Rond et al., 2019; Huang, 2018). Since sensible knowledge may only be acquired by tapping directly into body-based knowledge (Polanyi, 1966: 49) and passed on as ‘knowing in action’ (Amin and Roberts, 2008; Antonacopoulou, 2019; Lund Dean et al., 2019), management learning needs to be explicitly concerned with teaching how to notice and make sense of visceral and affective reactions.

Experts in their respective fields report that it is essential to attend to physical and affective sensations at the highest level of expertise (Amin and Roberts, 2008; Polányi, 1966: 49; Stierand, 2015). As a result, sensory-based management learning facilitates deeper, more meaningful embodied knowledge transfer (Dörfler and Stierand, 2018) through such practices as master-
apprentice relationships (Dörfler and Eden, 2019), cross-disciplinary learning through projects (Boud and Tennant, 2006), cognitive apprenticeships (Austin, 2009), and communities of practice (Wenger-Regner and Wenger-Regner, 2014). Becoming attuned to sensory perceptions is often beyond the traditional job-specific competencies that can be explicitly articulated (Bergen, 2012; Panayiotou, 2017), which is particularly true for managerial jobs. However, much of managerial know-how that cannot be transferred explicitly and directly, can only be transmitted experientially, through observing, practicing, and getting feedback (Strati, 2007). Such transfer of knowledge engages one’s senses, as has been established in early childhood and arts education (Blomert and Froyen, 2010; Thomson, 2015; Worthen, 2010) but largely overlooked in management learning. Strati (2007) suggests that sensory impressions not only produce emotional and aesthetic response to something, but also contribute to our understanding of it. Hence, in order to understand something to a greater extent, a sensory ‘reading’ of it may be necessary, as ‘the body is the medium of all perception’ (Essén and Värlander, 2012: 400, citing Merleau-Ponty, 1962: 146). There is a ‘greater potential to create deeper emotional connections and understanding when learning was felt in physical, visceral ways’ (Thomson, 2015: 5).

Sensory learning is described as ‘the ability of our perceptual systems to exhibit change and improvement in response to sensory input’ (Bays, 2016: xii). It involves one’s whole being, integrating a person’s physical perception, affect, and thinking (Kolb and Kolb, 2005). There are three distinct facets of sensory learning discussed in the literature: perceptual learning that facilitates improved performance through a repeated exposure to perceptual task stimuli, statistical learning that entails a perceptual grasp of patterns, and multisensory integration that
blends information perceived through different senses (Bays, 2016: 2, 4-7). All of these could be integrated with intellectual knowing in order to enhance the effect of management learning.

The first prerequisite for acknowledging (and possibly acting upon) sensory information is for the recipient to be aware of own sensations and feelings, which tends to be problematic for some analytically-trained thinkers. In management learning, literature suggests that art and non-verbal expression can be particularly useful in experiencing, expressing, and understanding sensory-based components of managerial concepts, particularly since ‘managers’ vocabulary for describing sensory (aesthetic) experience is often limited’ (Springborg and Ladkin, 2018: 536; Taylor, 2002). We found through our own teaching and consultancy that it is challenging to point out and utilize sensing in management learning without acknowledging and accounting for the resistance to the sensory by analytically-minded learners (Delaney, 2015).

In this paper, we do not address the discourse about sensory learning styles versus analytical approaches to learning such as memorization and repetition (Arbuthnott and Krätzig, 2015) nor do we suggest diagnosing or categorizing learners by preferred sensory learning styles. While sensory learning styles in that case refer to visual learners, auditory learners, or tactile learners in terms of their preferred method of getting information, we do not find it necessary to make this distinction in the context of management learning. We are interested in a general openness to all sensory inputs as the prerequisite for inclusion of sensible knowledge. Likewise, memorization and repetition may have their place as management learning tools; additional tools, which address the fact that managers are multisensory beings, can add dimensionality to, and enhance performance of manager. We advocate for a holistic and integrated approach to management learning, incorporating both intellectual strategies and sensory-based strategies to capture sensory-based tacit knowledge that is difficult to verbalize (Polányi, 1966). This knowledge may
be transferred through sensory-based approaches, using the whole body as an instrument. Sensory awareness, emotional engagement, physical expressions, physical artifacts, and various art forms can produce new simulations for experience usually viewed through the lens of managerial context (Gherardi, 2019; Gherardi and Perrotta, 2014; Panayiotou, 2017; Springborg and Ladkin, 2018; Strati, 2007; Tantia, 2014). We argue that increasing openness to sensing will inspire managers to mindfully and reliably incorporate it in their practice as a supplement to intellectual analysis, resulting in greater creativity, innovation, and reflexivity, leading hopefully to increased performance (Nagel et al., 2005). Incorporating sensing may enable adult learners to tap into their sensible knowledge, feel more empowered when making decisions under the conditions of uncertainty, and find orientation in cases where quantitative data does not point to a particular best answer.

Although inclusion of sensing in management learning may appeal to progressive managers and educators, it cannot be taken for granted that most of them will embrace the idea, as it is unlikely to change someone’s mind simply with facts and figures, as demonstrated by the ‘backfire effect’ (McRaney, 2013). It is our hope to gradually decrease resistance by acknowledging the role of sensing in management learning and providing educators with a deeper understanding of the stumbling blocks and the language to address them. This will help them create space for adult learners’ cognitive restructuring so they can see things in a new light (Kuechler and Stedham, 2018).

**WHAT HINDERS OPENNESS TO SENSORY-BASED LEARNING?**

Sensory-based learning can be challenging for analytically-minded thinkers, as in addition to intellectual engagement, it entails a conscious engagement of senses and affect in a learning
experience (Gherardi, 2017; Lund Dean et al., 2019), an activity they are not used to and have not been trained in. This is drastically different from the classroom learning typically focused on language-based, intellectual processing (Raelin, 2007), to which managers are more accustomed. To notice and attend to subtle changes in our senses requires practice, which can be sharpened through encouragement and meaningful feedback. As with any practical skillset, more opportunities to experiment and practice are needed for managers to enable learning in action (Antonacopoulou, 2019; Gherardi and Perrotta, 2014; Pink, 2011). However, in order to facilitate it efficiently, we first had to identify the reasons for learners’ resistance to sensing.

Over the past 10 years, we have taught more than 50 classes on managerial competencies in the US, Asia, and Australia, as well as in corporate settings in the US, to thousands of learners. Our observations revealed that learners often struggled to express themselves when discussing what they sensed; they frequently had difficulty noticing and delineating physical sensations as well as changes in affect; they asked for academic references and outright dismissed them before reviewing the content; they broke into forced, uncomfortable laughter when it appeared to them that they were not doing a sensing-based exercise ‘correctly.’ Validation of these emerging behavioral patterns took place through casual conversations with participants and with each other, in the process of transpersonal reflexivity (Dörfler and Stierand, 2020). We also explored the causes for the behavior by consulting the literature. As a result, we identified common barriers to sensory-based learning for analytically-minded thinkers, which we discuss below, illustrated with examples from our teaching: preference for sequential reasoning style, lack of sensory awareness, inadequate vocabulary, mistrust, dismissive attitude, discomfort of learning outside the comfort zone, corporate social norms against sensory information, as well as not admitting to, or denying, use of sensing.
Preference for Sequential Reasoning Style

The most apparent challenge analytically-minded thinkers appear to have with sensory–based learning is the disparity between the way they prefer to process information (Allinson and Hayes, 1996; Bakken et al., 2016) and the way sensory awareness emerges. This became evident during multiple workshops we conducted for groups of self-identified analytical thinkers, where some of the participants attempted to grasp sensory awareness by insisting on linear, highly structured, detailed, verbal directions and then tried to apply them literally. For example, participants were asked to notice what it feels like viscerally to inhabit their bodies, in this space and time, to notice what comes in through their senses at the moment, and write down a few notes on their experience. The idea behind this exercise is to help learners intentionally focus on their senses – the senses that are often taken for granted and therefore ignored (Robinson et al., 2017). Participants would often respond in a defensive manner, displaying frustration: ‘What do you mean?! What exactly am I supposed to sense?’

The lack of understanding did not appear to stem from participants’ lack of comprehension of the directions. Rather, it seemed to be their analytical thinking style that hindered the decoding of sensory-based messages, especially if they were not used to consciously registering sensory signals (Booth-Butterfield and Booth-Butterfield, 1990; Epstein et al., 1996; Gendlin, 1984). As a result, participants expressed mild frustration with the educators and the material, asking for specific things to do rather than noticing ways to be. Processing information that relies on sensing and self-awareness rather than on sorting a logical sequence of facts does not seem to come easily or naturally to many learners, especially those who have not had much previous exposure to it (Caton et al., 2013). In order to facilitate sensory-based learning for analytically-
minded thinkers, it may be useful to supplement sensory-based exercises with a sequential line of supporting evidence that can be processed and intellectualized by thinking through it.

**Lack of Sensory Awareness**

In addition to adapting to analytical thinkers’ reasoning style, it may be useful to help them cultivate sensory awareness or felt sense (Gendlin, 1962). Analytically-minded learners may struggle not just with making meaning of the sensory input they receive, but on a more basic level, with *recognizing the fact* that they received sensory input (Krycka, 2014; Leijssen, 2007). Sensing one's own body, as well as identifying occurrence of affect or feelings, might sound like a foreign concept to someone who is not used to paying attention to changes in physical sensations. This is problematic because sensory-based learning cannot be conveyed intellectually, but rather, it has to be experienced through senses (Stierand, 2015). Clearly, outside of the classroom, analytically-minded thinkers do master skills that require sensing, such as swimming (Yakhlef, 2010), keeping balance on a bicycle, or parallel-parking. We could draw on these experiences to help them understand how they already utilize sensory awareness. It could be achieved by encouraging them to consider their senses like vision, taste, smell, touch, and hearing (Yakhlef, 2010) - senses they have learned to trust over the years in everyday situations.

This approach may require patience (Sinclair and Bas, 2017). If a question such as ‘where does happiness feel in your body?’ sounds too abstract, an educator can step back and begin with body awareness exercises that are more familiar. For example, ‘Raise your shoulders up to your ears, then, drop your shoulders all the way down, do it again several times, and notice which position feels more relaxing.’ Then, learners and educators can analyze together why a particular shoulder position may be associated with a certain sensation, correlating the experience with data about
muscle tension. If learners receive the bodily signal from raised shoulders, for example, but do not register it, they could miss out on useful, relevant information, which turned up in a manner that is not obvious to them due to their lack of awareness.

**Inadequate Vocabulary**

In order to talk analytically-minded thinkers through developing their sensory awareness, a careful choice of words that are acceptable and understandable may help them make sense of the material. In our experience, many adult learners expect research-based evidence and data outlined in terms that are reason-based rather than feeling-based – a precondition for their willingness to take new information seriously. It became apparent to us that in order to enable analytically-minded learners to align what they *experience* with what they *understand*, directions for sensory-based learning need to be phrased in terms which can be initially processed analytically. Lack of vocabulary for describing sensory awareness presents a significant barrier (Petitmengin-Peugeot, 1999). Developing sufficient and acceptable vocabulary that enables a clear discussion of sensory-based knowing is still a work in progress (Sadler-Smith, 2016; Springborg and Ladkin, 2018; Taylor, 2002).

It seems that there is a lot of term-borrowing from the new age and popular culture or sci-fi literature, but these terms may already mean something else (Sinclair and Ashkanasy, 2005). Throughout our classes, we have been cautiously borrowing terms from other reputable scientific disciplines, ranging from neuroscience to quantum physics, but these terms are not self-explanatory for professionals who have not studied the field. Between the new age lexicon and scientific jargon, it is a struggle for educators to make the language for sensing in management both clear and intelligent. Using metaphors may be one of the possible effective solutions (Dörfler, 2010; Epstein, 1994), as metaphors have the power to create compelling relatable
images that communicate the concept without resorting to analysis and verbal rationalization (Cairns-Lee, 2020; Tantia, 2011).

Mistrust

Mistrusting sensory-based perceptions can result from one’s inability to track logical progression to knowing (Dane, 2019), as well as from inability to verify sensory information. Sensory-based knowledge also may appear vague and less definitive than a spreadsheet with numbers. Yet, people extract meaning from art, dance, and music as much as they do from numbers and stories (Adler and Delbecq, 2017). All these inputs can equally inform our mood and behavior. One may argue that meaning extracted from numerical and verbal data would be less open to individual interpretation than meaning extracted from art and other media that are perceived viscerally (Merritt, 2010). However, the real difference appears to be not so much in objective data interpretation, since no such thing is possible (Cunliffe, 2003), but in our ability or inability to adequately explain how we have extracted the meaning. When we receive a signal through the senses, it is not always apparent what triggered it, or how to interpret it; we only notice that something has changed inside of us. Sensory perceptions do not lend themselves well to explicit, verbal description (Crossan et al., 1999; Taylor and Statler, 2014) and cannot always produce measurable outcomes, such as a mathematical formula. Educators may need to help learners develop trust in their senses, just as they have learned to develop trust in their intellect.

Dismissive Attitude

We noticed that learners in corporate classrooms struggle with overcoming a dismissive attitude, which is consistent with the literature (Burneko, 1997; Hoffman, 2011; Whitmarsh, 2011). It is expressed by approach-avoidance behavior (Lewin, 1935) during exercises and Q&A sessions. On one hand, our workshop participants were willing to ask questions as a sign of openness, and
on the other hand, they seemed ready to dismiss the response even before hearing it, even if the response was well-substantiated and well-explained. Dismissive attitude is an obstacle not only for analytically-minded learners as they ease into sensing, it is also a challenge for educators. Even when information comes from sources that are traditionally considered credible in the academic and corporate world, analytically-minded thinkers tend to question the credibility of the presented research, as their perception is tinted by personal biases, upbringing, data-driven culture, skeptical peers, and a work environment that does not support sensory-based evidence (Sadler-Smith and Shefy, 2004a).

When analytically-minded thinkers register sensory information, they may not fully trust their senses due to possible history of lacking sensory awareness and inability to translate sensory input into useful information which can be analyzed. In some organizations, discourse about sensing and aesthetic experience is not considered legitimate, which leads to such experiences being ignored and excluded from organizational memory (Taylor, 2002: 827). In order to help learners embrace sensory-based evidence, it is important for educators not to misinterpret seemingly confrontational questions as disrespectful or belligerent, and not take personal offence. Hence, addressing dismissive attitude, or at least, bringing it into learners’ awareness, can have a significant positive impact on their ability to access sensory-based information.

**Discomfort of Learning Outside of the Comfort Zone**

When analytically-minded thinkers go outside the comfort zone of their current knowledge, dismissing the presented information is an easily accessible defense mechanism, which may force them either not to register the sensory signals or to suppress them as socially unacceptable, random, or irrelevant (Dane, 2011; Lindeman et al., 2012). While people generally experience
discomfort associated with learning outside of their comfort zone (Brown, 2008), analytically-minded learners, especially high achievers, may experience this discomfort even more sharply. For them, sensory-based learning entails a high probability of initial failure, a risk of being ridiculed by peers, and possibly harsh self-judgment that may undermine one’s self-esteem. Learners who excelled in their studies and have established themselves at the highest levels of excellence seem more uncomfortable with failure, and associate it with losing face (Ardichvili et al., 2003). We observed high achievers' reluctance to risk their reputation in order to experiment, unless they have made developing sensory awareness a priority in their personal development and have had prior positive experience with it. Also, if achievement in a new area came too easily to them, it could have made them doubt the quality of their work.

Uncertainty about one’s own ability to deliver high quality performance can prevent experimentation (Brown, 2008). When analytically-minded learners chose to participate in sensory-based exercises, they tended to use qualifiers and self-depreciating comments, such as: ‘I have never done this before, so go easy on me’ or ‘I am probably doing this all wrong.’ After trial-and-error, we have found that a discussion about what it means to be a novice can serve as an effective encouragement. Reminding learners what it is like to start learning something new, emphasizing that it is normal to be a novice in one area and an expert in another puts them at ease and allows them to keep an open mind about sensory-based learning. For example, we asked participants in our workshops to recall the time when they started to play their first sport or instrument, how it felt being a novice, and how they developed a comfort level with the new activity. Mastering sensory-based learning can be compared to learning a new topic into which most of the knowledge from other known disciplines does not transfer. Hence, it is inevitable for
learners to practice sensory-based skills as novices at first and expect to make many mistakes, knowing that it is not a reflection on their general abilities or talents (Sinclair and Bas, 2017).

**Corporate Social Norms against Sensory Information**

It has been our experience that despite the growing movement in academic research to demonstrate the value of sensible knowledge in practice-based learning (Brewis and Williams, 2019; Valtonen et al., 2017; Willems, 2018), organizations still seem to be slow to embrace it. New ideas can be polarizing, even when they are well-researched and well-presented. One may need time to process the new information, or wait for the early adopters to convert novelty into mainstream, before the emergence of social norms accepting of the new idea (Goldstein et al., 2008). The initial polarization seems to stir up uncertainty about sensory-based learning. We observed an interesting example of this during a workshop on intuition and creativity, with a large sensory-based component. Nearly half of program participants discounted sensory-based tools as bogus and were shocked to see sensory-based learning placed alongside more traditional academic methods. The other half was genuinely interested and stayed after class to elaborate on the presented material and discuss their own experiences, which they did not dare to share during class.

It has been known from research that people’s behavior is often more influenced by social norms than their own beliefs (Tankard and Paluck, 2017). We observed this idea in action with managers’ ‘trusting-not-trusting’ dance in organizations, not relying openly on sensing as a source of knowing because of their perception that colleagues in the organization may not accept it. Several participants in our corporate workshops described their reluctance to bring insights based on ‘having a sense for a situation’ to their teammates and managers in fear of being
ridiculed (Saarelainen et al., 2006). Sensing alone is ‘just not good enough’ in the corporate culture of quantitative approach, according to the software engineers in our workshops.

This led us to the conclusion that it may be more effective to reshape social norms regarding sensory-based learning, rather than change managers’ individual beliefs about it, with an expectation that the new corporate social norms will influence their behavior (Goldstein et al., 2008). In the meantime, management educators can be encouraged to evaluate emerging research on sensory-based learning, notice pervasive use of sensory information by their colleagues, and possibly become more transparent about using their own senses, thus creating pockets of microclimate conducive to the acceptance of sensory-based learning. Such transparency could in turn lead to a shift in social norms toward embracing sensory perception as an addition to intellectual assessment in management learning.

**Not Admitting to, or Denying Use of Sensing**

The role of sensing in management is just beginning to see the light of day (Antonacopoulou, 2019; Springborg and Ladkin, 2018; Zundel, 2013). Not admitting to sensing as an essential dimension of management learning can lead to missing out on solutions and discoveries for the lack of a ‘reasonable’ justification, which may be more widely acceptable in management (Dörfler and Eden, 2019). Denying sensing as a source of information can also result in inaccurate accounts of the pathways to solutions, as managers can be required to provide an explanation of the way a solution was obtained (Saarelainen et al., 2006). Partially due to the standardized formal education in the Western world, and to the accepted cultural canons in management and computer science, sensing can be perceived as unfavorable, unprofessional, and less valued than rationality-based models, which is probably why managers are often reluctant to admit reliance on it (Sadler-Smith and Shefy, 2004b). Management educators can bring sensible
knowledge into focus, shedding light on sensing as a valid counterpart of intellectual knowing, and an explicit dimension of management learning. In turn, managers may then choose to tap into sensing at work progressively more, without fear of being embarrassed, bringing into alignment social desirability of creative insights and acceptance of sensory-based methods that often lead to such insights (Feuls et al., 2015).

CONCLUDING REMARKS

In order to operate effectively amidst the uncertainty of complex modern-day economic landscapes, global crises, changes coming from unexpected directions, and increasing uncertainty (World Economic Forum, 2016), managers are expected to learn much faster, figuring things out ‘as they go’ rather than ‘before they go’ (Chia, 2017; Ingold, 2000: 230; World Economic Forum, 2016). Sensory awareness can help address the growing need for flexibility and adaptability at the workplace (Weick, 2007), supplementing the use of intellect by utilizing the whole body as a source for sensible knowledge (Strati, 2007). If sensing becomes a more accepted topic of conversation in management learning and performance, then in principle, managers will legitimately be able to use sensing as a valuable supplement to rigorous analysis, logical argument, and deep thinking, with the understanding that sensing and ratiocination complement rather than replace each other (Epstein, 2011).

Our paper makes a theoretical contribution to the debate about the importance of sensing in management learning, the need to have transparency around it, as well as cultivating openness to sensing in individual learning and organizational performance so that it can be incorporated into mainstream learning models alongside intellectual knowing. The paper also makes a practical contribution by alerting educators to reasons why analytically-minded managers may be resistant
to sensory-based learning, giving them the language for tactfully acknowledging the situation so they can help learners overcome this resistance.

Empirical research suggests that sensory-based information processing works seamlessly together with reasoning, in various configurations, depending on the situation and context (Hogarth, 2001; Huang, 2018; Sadler-Smith and Hodgkinson, 2016; Sadler-Smith and Shefy, 2004b; Woiceshyn, 2009). It may also bring to the surface tacit knowledge that can support managers moving forward amidst uncertainty (Dörfler and Bas, 2020b; Huang, 2018). There is a great degree of variation in the extent to which managers are encouraged to reflect on their sensory experiences and affective capacities. For instance, when organizations support master-apprentice relationships, there is a greater chance of passing on the tacit and sensory-based components of mentors’ experience (Dörfler and Eden, 2017). The best musicians, chefs, athletes, and scientists are esteemed precisely for their ‘sense of the game’ in their respective fields and their professional intuition (Dane and Pratt, 2007; Stierand and Dörfler, 2016), even when formally they are recognized for more quantifiable achievements (Bas et al., 2019).

Studying expert performance tells us that sensing, and readiness for sensing, are worth developing (Dörfler and Eden, 2019).

However, even if organizations get fully on board with openly incorporating and supporting sensory-based aspects of management learning, some managers may have difficulty overcoming years of school and corporate conditioning against sensing as a valid way of knowing. Learning to attend to sensing and interpret received signals may require breaking through barriers which include: preference for sequential reasoning style (Bakken et al., 2016), lack of sensory awareness (Krycka, 2014), not having adequate vocabulary to talk about sensory experiences (Taylor, 2002: 837), mistrusting one’s senses (Dane, 2019), dismissing sensory perceptions
discomfort with the process of mastery when it comes to sensing rather than analyzing (Ardichvili et al., 2003), getting over the established corporate social norms against sensing (Goldstein et al., 2008), and habitual denying of sensory input (Saarelainen et al., 2006). Learning to notice, understand, and appropriately incorporate sensory-based input in conjunction with intellectual assessment into their practice will help managers become more attuned to the changes in the landscapes and environments of their work; it will make them more flexible and innovative in their response. This should be particularly noticeable when data-driven navigation from point A to point B is impossible due to unknowable uncertainty (Dörfler and Bas, 2020b), and the only feasible way to move forward is by sensing, using the whole body as a compass (Symonds et al., 2017), ‘knowing as we go’ (Ingold, 2000: 230).

We argue that further uncovering and exploring the sensory-based dimension of management learning is a worthwhile endeavor. Identifying its barriers for analytically-minded thinkers is the first step in helping organizations, individual managers, and management educators move towards a frank conversation and wider acceptance of sensing as a necessary learning and performance tool, and ultimately as a way of knowing (Antonacopoulou, 2019; Gherardi and Perrotta, 2014; Strati, 2007). To address this ‘elephant in the room,’ we call for acknowledging it openly, as it is already here, it is staying, and management learners and educators may as well make themselves comfortable with it. In order to meet the demands of the ever-changing professional landscapes, we invite a comprehensive, transparent conversation about sensing in management learning. We encourage being open about tiptoeing around this metaphorical elephant and addressing the root causes of this discomfort.
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