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Tracing the Becoming of Reflective Practitioner through the Enactment of Epistemic Practices

Purpose: This exploratory paper aims to develop a conceptual framework for tracing the cognitive and affective micro-processes management accountants can draw upon in order to construct themselves as reflective practitioners within organizational context.

Design/Methodology/Approach: Drawing on pragmatic constructivism and Heron (1992)'s theory of learning and personhood, the framework provides a methodology for tracing the way management accountants can construct themselves as reflective practitioners by enacting epistemic practices (Cetina, 2001). Furthermore, we enquire into the epistemological requirements for creating trustworthy knowledge and the processes through which actors can diminish the proactive-pragmatic truth gap.

Findings: The framework shows how the participatory function of the mind, deeply rooted in affective processes, is implicated in creating empathic engagement with epistemic objects. Besides the affective dimension, there is the need for logical inferences to link facts and reveal possibilities for helping actors to pursue their value system. Coupling affective and logical processes fosters passionate humility, which helps actors create clear communicative acts with whom other actors can resonate, leading to the development of functioning practices.

Research limitations/ implications: Providing a framework for tracing the micro-processes of epistemic practices can serve as a tool for researchers to acquire a more detailed account of the practice and. By looking into the epistemological aspect of practice, researchers could be able to go beyond describing practice and suggest improvements from a pragmatic point of view.

Originality/ value: The paper provides a novel insight into the analysis of management accounting practice by showing the interplay between affective and cognitive processes in sustaining epistemic practice. Additionally it opens up the dialogue on trustworthiness of knowledge generated through epistemic practices.

Keywords: epistemic practice, empathic engagement, pragmatic constructivism, participatory function,

1. Introduction

In the past decade, the literature on management accounting change has been gathering evidence on the changing role of the management accountant, which has shifted from that of the traditional “bean counter” toward a business partner role. This meant not only a change in the way of gathering data but also in the way data are structured and interpreted to assist operational managers in their decision-making and management control processes (Friedman and Lyne, 1997; Granlund and Lukka, 1998; Järvenpää, 2007). Management accountants are now expected to be more approachable, possess commercial awareness, be team players, have communication skills, and approach organizational issues in a flexible way (Byrne and Pierce, 2007; Lambert and Sponem, 2011).

There are multiple institutional and cultural forces such as IT technologies, reporting systems, and organizational etiquette (Järvenpää, 2007; Baldvinsdottir and Burns, 2005), shaping the role of the accountant. At the same time, actors themselves have a considerable influence by mediating the exchange between different knowledge types (Byrne and Pierce, 2007; Goretzki et al., 2013; Mouritsen, 1996). As a manager reported to Järvenpää (2007, p. 114), organizational structures and culture can be conducive to an active role, but ultimately it “has to be *gained* by a person’s own work and competence.” This means that accountants must have the ability and willingness to develop a learning-based orientation toward the production and use of accounting information, rather than a performance and mechanical orientation (Coad, 1999; Nørreklit, 2011). If they do so, accounting and management will evolve into a communicative partnership between actors and structures in order to foster learning dialogues (Fauré & Rouleau, 2011) and support the creation of reflective cultures (Russ Vince, 2002; Raelin, 2001).

In general terms, the business partner role involves a reflective practitioner (Donald Schon, 1983), able to both reflect, *in* the midst of the action, and adopt distance and reflect *on* actions in the broad organizational context. It is noticeable that although reflection-on-action, concerning how practices look from outside, has been widely explored, reflection-in-action has received far less scholarly attention (Jordan, Messner, & Becker, 2009). The difficulty might stem from the fact that practices are fussy, fluid, and unpredictable (Ahrens & Chapman, 2007), stretching beyond numbers and calculative practices (Mouritsen et al., 2009) connecting disparate contextual information to envision narratives for future possibilities (Ahrens and Chapman, 2007; Mitchell et al., 2012).

However, the literature on mindfulness has been suggested to be of benefit to the investigation of reflection-in-action (Jordan et al., 2009). Mindfulness can be defined as “a state of mind or mode of practice that permits the questioning of expectations, knowledge and the adequacy of routines in complex and not fully predictable social, technological and physical settings” (Jordan et al., 2009 p.468). Along the same lines, Yanow and Tsoukas (2009) describe reflective practices as those intended to explore different ways of seeing rather than accepting the usual or most evident explanations, which requires practitioners to remain permeable, that is, to make their inquiry publicly accessible. Such openness is built upon the acceptance of the possible anxiety arising from not knowing (or being publicly perceived as not knowing). It requires setting aside one’s ego, allowing someone else to take center stage and surrendering control over the situation. Rather than subject-matter expertise, reflective practitioners need to develop expertise in the processes of mutual inquiry,

to allow themselves to be surprised, and develop a sensitivity to contextual backtalk (Donald Schon, 1983)¹ and improvisational ways of responding to it (Yanow and Tsoukas, 2009; Jordan, 2010). Echoing the idea of permeability, Yanow (2009) further develops the argument for passionate humility; an attitude that induces people to be reflective, to be willing to listen and to engage in a conversation by using a language of inquiry, rather than the language of certainty so often used by professionals and experts.

Looking at the above-mentioned literature, we note that researchers are equipped with a range of concepts suitable to describe the characteristics, attitudes, and interactional modes requested from reflective practitioners. However, there is still considerable scope for developing theoretical frameworks and methodologies that help researchers trace and analyze the micro-processes of these practices (Goretzki et al., 2013; Wolf et al., 2015). We contend there is even more space for investigating how actors not only engage in reflective practices in order to produce diverse and nuanced ways of knowing, but also how they validate and leverage them in order to produce functioning practices, that is, practices able to sustain the achievement of desired results.

The present paper investigates these problems by drawing upon the work of Cetina (1997, 2001), and that on pragmatic constructivism (Nørreklit et al., 2010) and Heron (1992). It aims to investigate the practices through which actors construct themselves as reflective practitioners in an organizational context. More specifically, we look into the unfolding ontology of epistemic objects of management accounting and their sensitivity to actors' interventions. This ontological stance focuses on the interactions between actors and these epistemic objects, which are always in the process of becoming.

Below we trace the cognitive and affective micro-processes available to actors to engage with epistemic objects in order to create trustworthy knowledge and construct functioning practices. Functioning refers to the ability to bring about the intended results, while trustworthiness is achieved by implementing validation techniques for the epistemic structure governing the production of the construct causality (Nørreklit, 2011; Nørreklit et al., 2007)

We apply the framework to a selection of case studies from the literature in order to show how researchers could gain an in-depth understanding of practices. Moreover, we illustrate the importance of integrating multiple ways of knowing in order to create functioning practices. This does not mean

¹ Backtalk is the immediate, non-rational way of communicating through the mere presence of materials (human and non-human). (Donald Schon, 1983)

to aim for perfect information, but for an increased awareness of contextual backtalk and flexibility toward multiple scenarios and alternatives that might be conducive to the achievement of their goals.

Through our reflection, which is presented in the form of a conceptual framework, we aim to contribute primarily to the research community, by providing a methodology to trace and grasp the ways in which actors create and enact epistemic practices and diagnose whether they work. Furthermore, by adding criteria for pragmatic knowledge validation, we address both researchers and practitioners and enrich the academic dialogue by raising the topic of the epistemological dimension of practice, an area that remains underdeveloped in the literature addressing these issues (Cetina, 1997b; Nicolini et al., 2012; Nicolini, 2006; Jordan, 2010).

2. Conceptual framework

To provide insight into the reflective practitioner in-action, this paper builds on the conceptual framework of epistemic practice presented by (Cetina, 1997b). Central to epistemic practices are epistemic objects and the subject–object relationship. The subject is *the actor*, who is reflective and affective. The *epistemic object* is the object of investigation, which is also the carrier of the reflexive and affective aspects of these practices. The epistemic practices take place through the enactment of a relational idiom between the *subject* and the *epistemic object* aimed at revealing the object. Without this relational idiom, the epistemic practice cannot exist.

In order to be able to understand how the actor can engage in a learning relationship with the object of investigation, we reflect upon what the epistemic objects of management accounting are, thereby revealing the nature of their backtalk and how one can develop the listening skills to hear it. Unlike Cetina's molecule, epistemic objects of management accounting are not natural science objects but human constructs such as budgets, indicators, measurements. This they are more fragile when subjected to the intervention of the actor, and their materiality is more volatile and dependent on the way actors engage and interact with them. Hence their backtalk is different from the one produced by epistemic objects of natural science.

Below, a more detailed description of the epistemic object of management accounting, the object–subject relationship, the request to an epistemic model and the epistemic practice integrating personhood and methodological abilities are presented.

2.1. The epistemic object of management accounting

Drawing on (Rheinberger, 1997) work on natural science research, Cetina asserts that the driving force of epistemic objects lies in their materiality.

According to my position, scientific or epistemic objects are clearly material things. They function as scientific or epistemic objects by virtue of their opacity, their surplus, their material transcendence, if you like, which is what arouses interest in them and keeps them alive as targets of research.(..) They are epistemic by virtue of their preliminaryity, of what we do not yet know about them, not by virtue of what we already know about them. They are epistemic because it has not yet been determined whether they will become obsolete as targets of research, or whether they will become transformed into stable, technical objects that may define the boundary conditions of further epistemic objects. (Rheinberger, 2005, p. 406).

In organizational environments, when addressing management accounting matters, the objects—such as performance measures, budgets, and indicators—are *not* material in the same way as natural science objects. However, they *are* perceived by organizational actors to possess a high degree of facticity and to be opaque due to the complex relationship network between different actors, technologies, and the relevant environment. The relevant objects therefore stir interest and are intriguing candidates for inquiry, or in Rheinberger's terms, targets of research. A characteristic specific to epistemic objects of management accounting is their being deeply anchored in and oriented toward social structures aimed at achieving specific organizational goals. Hence, the revealing of the epistemic objects is aimed at fulfilling purposeful actions and achieving specific results. For this reason, we look at the epistemic object of management accounting from the point of view of a construct causality.

Guided by pragmatic constructivism, construct causality is the result of integrating four dimensions of reality, that is, facts, possibilities, values, and communication (Nørreklit et.al, 2011). In order for such construct causalities to enable purposeful actions, they must express the subjective values that motivate the people involved, be within the range of the factual possibilities (and not illusions) (Nørreklit et.al, 2011), and be able to communicate this integrated structure of facts, possibilities, and values among the people involved. In other words, facts, possibilities and values represent the materials, the backtalk of which the actor must monitor. These are the dimensions which need to be unveiled and explored by the actor in demystifying the epistemic object.

As mentioned above, epistemic objects become targets for human investigation because of their characteristics of being open, complex, and question-generating (Cetina, 1997b, 2001). Openness refers to the capacity of the object to unfold indefinitely, or in other words, it is boundaryless. Unlike

the thing-like character of the boundary objects we conceive of in our daily activities, epistemic objects lack completeness of being. They are always in the process of being materially defined and constructed, constantly acquiring new properties and modes of integration, and changing the ones they have. Objects' coming into being is sustained by an actor's capacity to produce multiple construct causalities which become facts (or do not). These facts are the phenomenological grounding for subsequent actions and are relevant as components of the actor–world relationship. The difficulty of producing construct causality lies in the continuous change in the factual possibilities which depend on other social and organizational structures, that is, other topoi (Nørreklit et al., 2011), embedded within organizations. Actors' ability to sustain the unfolding ontology of the epistemic object, and hence to produce a construct causality that leads to functioning practices, relies on their ability to integrate these co-existent topoi in a coherent manner.

The idea that objects have an opaque, unfolding ontology implies that knowledge is highly complex and can never be fully attained. Epistemic objects are aspects, processes, and projections rather than definite things. The actors can attain and grasp certain representations and projections of the objects (facts about the object), but never in their entirety. Management accounting technologies (as epistemic objects) are opaque due to the complex relationship network among multiple actors aiming to construct a set of functioning activities involving complex technologies and institutional processes. There are multiple aspects of the technologies, institutions and human beings that can co-exist in a variety of forms which can then be translated into all manner of business constructs. However, the constructs only provide a functioning practice if the various topoi, and their elements, are integrated. Hence rather than aiming to grasp them in their entirety, the construct causalities should be conceived as unfolding structures of incompleteness (Cetina, 1997).

The question-generating characteristic refers to the knowledge object in its relational idiom with the subject that stimulates the curiosity of the actor. The relational idiom is facilitated on one hand by the ability of the object to unfold and attract the actor's curiosity and on the other hand, by the capability of the subject to explore the hidden dimensions of objects. In a business context, managing the openness and complexity of construct causalities forms a condition for creating functioning competitive activities contributing to an organization's profitability, hence managers are constantly inquiring into ways of reconstructing and reinterpreting organizational reality.

2.2. *The Object–Subject relationship*

The form of being in relation with the epistemic object is what shapes the epistemic practice. Without this relational idiom, epistemic practice cannot exist. Exploring the object as an epistemic object, requires actors to employ various strategies to visualize it and its environment under a range of circumstances, thus enlarging and enhancing the object. Simultaneously, actors consciously draw upon relational resources that help them overcome the subject–object separation and engage in being in relation with the object in order to be able to continue to act. These relational resources are: having an orientation toward the other (the object), making an emotional investment in the other, exhibiting moral solidarity, and engaging in some form of empathy (Cetina, 2001). Actors’ experiences of intensity and pleasure when engaging in being-in-relation with the epistemic object opens up the space for deep emotional investment in the object of knowledge. However, the epistemic object, through its more or less volatile materiality and ability to structure desire, binds actors in an effort to uncover its hidden dimensions.

Accordingly, the relational idiom between object and subject is facilitated by the capability of the object to reveal itself (the openness of the object). At the same time, actors’ capability to engage and make a cognitive and affective investment in exploring an object’s hidden dimensions (openness of the subject toward the object) and the acceptance of various vistas (openness of the subject toward others) provides for the objects’ continuity.

The actors interacting with the knowledge object form the *in-thought* community (Cetina, 1997b) exploring and revealing different facets of the object. Not respecting an object’s unfolding ontology, leads to breaches in communication, as the facet rendered visible *becomes* the object, blocking the possibility of further exploration. This neutralizes the binding capacity and hence, there is no incentive for knowledge sharing. The knowledge object becomes a boundary object, the common pursuit and collectiveness being replaced by strategies of aligning interests (Nicolini et al., 2012).

2.3. Being-in-relation and criteria for trustworthy knowledge

As mentioned above, one specific characteristic of the epistemic object of management is its role in enabling purposeful actions. The epistemic practice becomes the conceptual model for creating construct causality. In order to inquire into the ability of the rendered knowledge to sustain desired results, we introduce the concepts of proactive truth and pragmatic truth (H. Nørreklit et al., 2007) as validity criteria. This is important because, while recognizing that all knowledge representations and

projections have the potential to trigger learning, within the organizational context actors need to choose which knowledge representation to leverage and act upon to achieve their purposes

Proactive truth is a linguistic and theoretical expression of the perceived organizational world which, when acted upon, becomes a pragmatic truth (or do not). The guiding criteria for producing construct causality, which is proactively and pragmatically true, are correspondence, coherence, interpretation, and acceptance (Nørreklit et al., 2007, p.188). Correspondence stems from the phenomenological grounding of construct causality and the methodology used in observing the phenomena.

Coherence is viewed in relation to possibilities, values, and communication. The emphasis is on interpreting and identifying possibilities based on the flow of activities and their consequences for the fulfillment of the actors' values. When analyzed in relation to values, the concern is with the creation of a platform open to subjective acceptance or rejection of a value system by the participants. While actors produce construct causalities to advance their own values, the construct must give space for the coexistence of other value systems, avoiding situations in which one particular value system is impinged on another.

When viewed in relation to communication, coherence refers to the fact that within organizations, the achievement of goals depends on the participation of multiple actors, hence the coherence of the construct lies in the mutual comprehension of the various claims of truth. In this context, concepts become useful tools for expressing and grasping the encounter with the organizational world and for creating a coherent basis for collective action. Acting upon the proactive truth (which actors constructed) renders visible whether the construct causality is a pragmatic truth or a fiction, that is, whether its application leads to a desired result, or does not (Nørreklit et al., 2007).

2.4. Epistemic practice – personhood and methodological abilities

To this point we have described the nature of epistemic objects of management accounting, the subject–object relationship necessary for the enacting of epistemic practices and the criteria for creating trustworthy knowledge. But how can actors establish such an engagement with the epistemic object?

To provide an answer, we inquire into the cognitive and affective micro-processes involved in the recognition of facts, envisioning of possibilities, and communication of values by employing Heron's (1992) theory of feeling and personhood, complemented by Yorks and Kasl's (2002) concept of

learning-within-relationship. Learning-within-relationship is described as a learning experience in which people try to convey to their fellow learners the space and time they are situated in. Heron (1992) incorporates this view of the experience of learning using the idea that personhood is grounded in feeling and includes a transpersonal dimension.

According to Heron, the person expresses (at any point in life) the outcome of the following four interwoven modes of mind: the *affective*, *imaginal*, *conceptual*, and the *practical* (see Figure 1). Together they form a cycle of learning. The mind modes represent four continua enclosed within an *individuation function*, which establishes the person as a specific focus of experience and a *participatory function* that places the person into the wider being. The poles are in an interactive and dynamic relationship and require each other's presence. Through their interaction with the world of the epistemic object, four worlds emerge, each governed by specific ways of knowing and each with its own internal canon of validity. Within this paper, we are concerned with the knowing-in-relation, and accordingly focus on the ways of knowing produced by the participatory function, that is, experiential knowing, presentational knowing, propositional knowing, and practical knowing. Their interweaving forms a coherent and unified overarching learning experience. Below we first explain the four modes of mind and subsequently the four forms of knowing.

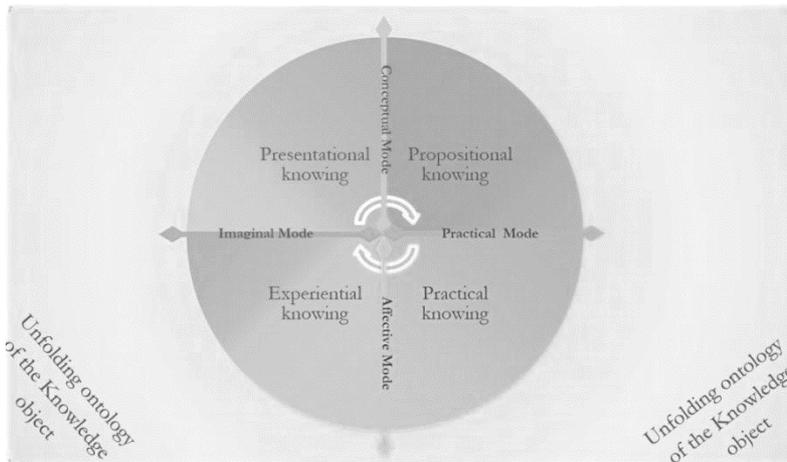


Figure 1 Personhood and knowing (adapted from Heron,1992)

Modes of mind

The *affective mode* has emotion and feeling as the poles of its continuum. Emotion represents the individuation function—a localized effect resulting from the fulfillment or frustration of individual needs and expressed through joy, love, grief, or anger. At the opposite pole, feeling represents the participatory function, defined as the capacity of the mind to participate in the wider world of being and its ability to recognize its distinctness while remaining unified with the differentiated other. Within this domain we find empathy, indwelling, resonance, and sensibility.

The *imaginal mode* is framed between the imagery and intuition poles. Imagining refers to the capacity to create a unique, personal view of the world by using imagery from sensory perception or imagination. Intuiting describes comprehensive knowing, which is based on the ability to place the imagery into the wider context, to see the connections and the meanings. Intuition helps actors to grasp the phenomena they feel, and to act in ambiguous or unfamiliar situations. Employing imagery helps actors to express that which rests on having a tacit intuitive grasp of the whole field, the idiosyncratic pattern of imagery becoming the reflection of the holistic intuition.

The *conceptual mode* has discrimination as the individuation function, referring to the ability to categorize things in terms of classes and identify differences and similarities. At the other pole, reflection, the participatory function, refers to thinking processes that seek to formulate comprehensive theories and models. The conceptual mode relies heavily on logical structures and mastery of language. Language, as Heron (1992) argues, can represent a disruption of the participatory nature of perception. Conceptualizing a perceived experience carries the risk of transforming the actor from an active participant into a passive observer. Heron (1992) suggests that in order to go beyond the subject–object split, we need to complement the habit of seeing things as instances of class-names with a layer of awareness of how we impute names to images around ourselves. By cultivating this awareness, we rebuild the connection to the world in which we are immersed, that is, we activate the participatory function.

Lastly, the *practical mode* has action at one pole and intention at the other pole. While action is the piece of behavior performed by the person, being the outcome of will and bearing the personal responsibility of that person, *intention* refers to the purpose that the person has in mind when performing an action and how that action is connected with the wider context in terms of its effects in time and space. This is the domain of planning, doing, designing, strategy etcetera. Action presupposes intention, and intention itself is consummated in action.

As mentioned previously, the interaction between the mind modes and the wider being of the epistemic object yields different types of knowing. Knowing emerges from the interaction of the mind with the world that is being perceived, is relative to it, and can only represent an incomplete and subjective account of it. When actors prioritize the individuating function they focus on their inner world, which is helpful for introspection. However, in order to relate to the outside world, the person needs to rely more on the participatory function. Accordingly, the participatory function is crucial to the actors' producing construct causalities conducive to the achievement of their goals. The following paragraphs will focus on explaining the experience of learning based on participatory function and the implications for producing construct causality through experiential, presentational, propositional, and practical knowing.

Knowing through participatory functions

The affective and imaginal modes, in their interaction with the being, yield *experiential knowing*, which represents the phenomenological grounding of the epistemic platform. When under the

dominance of the affective mode, the world is characterized by comprehensive awareness and holistic interrelated presence, which gives a sense of indwelling, unitive states of being and mutual resonance. This is important in developing the capacity to listen to the backtalk of the materials surrounding the epistemic objects. The more sensitive individuals become, the more perceptive to values and facts they become, and also which possibilities they can envision and communicate in a coherent manner so as to resonate with others.

Looking at management accounting studies, experiential knowing has been expressed through terms like *gut feeling*.

Somehow, there is often some kind of gut feeling involved, one has to often also judge things on the basis of feeling... [e.g.] One may not be able to tell exactly why [something is wrong], but one has a certain feeling and acts according to it. (Tillmann and Goddard, 2008, p.95)

I know a lot about sales. I can sense, for example, when I need to be mad, or smile. It is not something I can explain. (Latusek and Vlaar, 2014, p.13)

Within the above quotes we can see how individuals adapt their response in an encounter. Although they are not able to bracket their experience enough to conceptualize the situation in which they find themselves or their inclination toward one response or another, their sensitivity allows them to perceive the backtalk of various materials that are present in that space clearly enough to be able to use them as guidance for their behavior.

One canon of the validity of experiential knowing is declarative. When the person engages and resonates with a presence, it (the presence) declares itself to the I, meaning that it manifests intensely enough that actors become aware of the encounter with that presence even though they are not able to offer a declarative proof of it. It generates backtalk loud enough to be perceived by the person.

Should declarative proof be given, the person must enact the imaginal and conceptual modes, creating *presentational knowing*. Within this area, the mind slowly detaches from feeling and makes the first attempts to identify patterns of phenomena and their relations in order to make a declaration of the experience. The actor can use metaphorical language that yields a representation of the world encountered. This type of knowing is the foundation of construct causality, which provides a preunderstanding of the various facts at hand, their relationships, and the values embedded within them.

Presentational knowing and its power as a means to diffuse strategies and create strong brands within and outside organizations has been widely explored in management accounting studies (e.g. Walters-York, 1996; Akin and Palmer, 2000; Cornelissen, 2004). Furthermore, accounting systems like the balanced scorecard, have been presented as rhetorical machines able to drive knowledge creation through the power of visual inscription (Busco & Quattrone, 2015) and the use of metaphorical language and symbols.

Presentational knowing is the outcome of knowledge conversion, which takes place through a bracketing process. The dialectical tension between the bracketed elements (expressed through metaphorical language) and the experience felt needs to be balanced, as it affects the richness and complexity of the declarative proof. If the elements are too vague, there is no opportunity to grasp the experience. If the bracketing is too rigid, the declaration will be repressed by the conceptual imposition. The canon of validity of presentational knowledge will depend on whether there is a reasonable match between the associations induced by the metaphorical language and the phenomena they describe. In other words, the language used to make utterances on the phenomena needs to follow the criteria of correspondence and coherence. In this way, the construct becomes a trustworthy foundation on which to create construct causality (Nørreklit, et al., 2007)

When the actor intensifies the use of the conceptual mode, he or she enters further into an intellectual inquiry domain where the perceived world becomes the object of observation. The acquired preunderstanding is translated into models, formulas, and theories. The logic and the communication register are made explicit, bringing more accuracy to the construct's causality. The resultant construct can either remain in the theoretical field for reflection or can be applied to the practical world by enacting the practical mode through theories of application, technology, plans or projects, creating propositional knowing; that is, descriptive knowledge for action, hence finalizing the construct's causality. This is not to say that the knowledge object is finalized, but rather that the actor has acquired a conceptual construct to grasp the knowledge object.

The canon of validity of propositional knowing refers to the trustworthiness of the conceptual model to achieve the desired results. It probes the construct's proactive truthfulness (Nørreklit et al., 2007) by looking at its correspondence, coherence, and phenomenological grounding.

In their interaction with the epistemic object, actors produce a series of proactive truths, each with their specific possibilities for action, which become the object of scrutiny in choosing which option

will materialize. When deciding to take action, the affective mode becomes the carrier and enactor of individual values, which give specific directions to the process of selecting one possibility over another. Once this choice is made and the action is performed, *practical knowing* is generated. The proactive truth is subjected to the pragmatic validation. At this stage, the concern is to what extent the action renders the desired results, with the focus on the gap between proactive and pragmatic truth.

One dimension not expressly addressed in Heron's model is the communicative dimension, which becomes extremely important in the social context. As organizational activities are the result of collaboration, communication plays an essential part. Prior research reveals that although epistemic practices are grounded in individual mindfulness, they rely heavily on organizational structures (Nørreklit et al., 2007; Jordan, 2010; Cetina, 1997a; Russ Vince, 2002). However, one can argue that communication is implicitly present through the creation of declarative proofs (through language or art) and that it is not specified that these utterances are directed toward the other or to oneself. The difference when creating an utterance for oneself or for the other lies in the necessity of complying to a commonly agreed canon of communication, so that the other can comprehend the utterance.

Concluding the reflection on the conceptual framework, we have seen how epistemic practices are sustained by an epistemic object's unfolding ontology, and ability to trigger actors' learning curiosity on the one hand, and by actors' empathic engagement through various cognitive and affective micro-processes allowing them to reveal objects' hidden dimensions on the other. We highlight the importance of considering the trustworthiness of knowledge produced through epistemic practices and suggest that in order to create construct causalities which are proactive truths there is a need to rely on the participatory function that renders a more open and contextualized experience and enables actors to attune to the backtalk of various materials present in that specific context. Furthermore, we contend that correspondence and coherence are more likely to be achieved when room is allowed for the exploration and expression of all forms of knowing.

A phenomenologically grounded, factual basis is necessary for action. Based on facts, possibilities are envisioned and further on, actors' subjective values drive choices of action. Thus, if the actors' values are within the range of factual possibility, then actors will act. Finally, the integration of facts, possibilities, and value must be expressed in communication in order to enable action in a social setting. Once acted upon, a new experiential grounding for knowledge refinement closing the proactive–pragmatic truth gap emerges.

3. Transferring the epistemic practice framework into an management accounting context

In the following paragraphs, we illustrate the framework's applicability in the context of performance management. We analyze three articles: Wouters and Wilderom (2008); Ahrens and Chapman, (2007b) and Vaivio (1999). These are suitable case studies because they emphasize an individual's active role in the outcome of the management accounting process and highlight the various aspects of epistemic practices. The articles by Ahrens and Chapman (2007) and Wouters and Wilderom (2008) describe situations in which epistemic practices are successfully enacted, while Vaivio's (1999) article exposes how epistemic practices break down when actors reject the object's unfolding ontology.

Case 1- Departmental Learning

Wouters and Wilderom (2008) present a case illustrating the design and implementation of a performance management system in a logistics department. An experience-based process that allows for experimentation and involves a high degree of professionalism leads to a system that is perceived as enabling.

The knowledge object in this case was the performance measurement in the department of internal transportation and the warehouse. The initial standard measure was the number of transports carried per labor hour. After involving the truck drivers in the process, it became obvious that there were other side activities that had to be accomplished, and which depended on the items being transported. Therefore, the calculation was adjusted and feedback from truck drivers was gathered to identify ways of including side activities in the calculation. Thus, we witnessed the conceptual coherent propositional knowledge system being matched with experiential knowledge.

Adding new experiential knowing was conducive to the reshaping of presentational knowing; and accordingly, adjustments to the charts, outlays, and labels were made. Furthermore, employees leveraged their propositional knowing in order to re-conceptualize various terms within the company. For example, after engaging in reflective dialogue about the significance of the measurement labeled as *overcapacity*, they reached the conclusion that the term *theoretical utilization* would better reflect the underlying principles embedded in the calculation. Similarly, the chart label *efficiency* was

changed to *transportations per labor hour* (Wouters & Wilderom, 2008) thus replacing the evaluative ideas implied by the former term with the more descriptive characteristic of the latter. The language used for conceptualizing the knowledge object, that is, the transportation process and its efficiency evoked its unfolding ontology, interdependence with the outer context, and the dynamic between the object and subject. The term theoretical utilization expresses the fact that the indicator is just an engineered target, based on a design under which not all assumptions were met in reality (Wouters and Wilderom, 2008). This triggers a more critical approach to the resulting number and raises the question of what exactly is left aside, which in turn triggers the inquisitive mind of the individual (Heron, 1992).

The actions triggered by the new measures become the experiential grounding for the refinement of the initial idea. The experience is transposed into presentational knowledge and afterward into propositional knowledge; a cycle which (only) theoretically stops when the resulting actions are considered to be satisfactory, in other words when the knowledge generated is considered satisfactory. “PMS improvement concerned deliberate employee efforts to test, review conceptualizations, definitions, data, presentations of new measures” (Wouters and Wilderom, 2008, p.511). In other words, the truth gap between constructed causalities and results, that is, proactive truth and pragmatic truth, was diminished with every refinement, until the practices functioned in a satisfactory manner. However, the aim of reducing this truth gap is one only inferred in the study.

Furthermore, the importance of presentational knowledge is not emphasized. This might be because the issue of imaginal communication did not surface when the development and use of the measures was undertaken within the same group, which meant that they already shared similar vocabulary and similar ways of expressing themselves, and therefore the coherence was in a way embedded. This is not to say it is less important in the development process, as this is the final step before translating the processes into quantitative performance numbers.

Overall, the premise underpinning the *organic* performance measurement system was that “it is constantly growing, being reviewed and being pruned—a continuous tinkering to make it better” and the seed of the inquiry cycle was the shared experiences of the logistics team with the performance measurement system (Wouters and Wilderom, 2008, p. 505). As Wouters and Wilderom noted, the design and implementation were interconnected, meaning that the canons of validity of experiential, presentational, and propositional knowing were constantly cross checked. “New performance measures are never ‘right’ straight away and by allowing adjustments, their reliability and validity

are improved... both conceptual and detailed implementation issues are crucial for their effectiveness” (Wouters and Wilderom, 2008, p. 507). Here we witness the process of improving the phenomenological grounding of the conceptual framework. Accordingly, the intertwining of experiential and propositional knowing, mediated by presentational knowing provides well-considered a-priori knowledge and analysis of the performance measurement systems integration of facts, possibilities, values, and communication. Thus, the construct causality of performance management system is proactive truth and arguably pragmatic truth as it sustains the development of functioning practices.

CASE 2 – functioning practices

The benefits of making different organizational departments’ ways of knowing interrelate is revealed in the research conducted by Ahrens and Chapman (2007). They develop the concept of situated functionality in order to show “how organizational members actively reconstitute their management control systems by drawing on them as shared resources” (Ahrens and Chapman, 2007, p.1), presenting management control from a practice point of view. Management control as practice is a bundle of practices and material arrangements in which the actions and volitions are organized around practical understandings, rules, and engagements that condition and connect practitioners (Ahrens & Chapman, 2007)

Drawing upon theories of cognition in practice, Ahrens and Chapman (2007, p.18) justifiably argue that “as a structure of intentionality, management control is constituted in cognitive processes that are distributed over people, practices, arrangements and contexts.” However, as will be further explained below, it is not only the cognitive processes (propositional knowing) that define management control as a structure of intentionality, but also affective processes (experiential knowing) and imaginal processes (presentational knowing). Using an epistemic practice framework reveals these subtler processes and facilitates a richer account of the unfolding management control practice.

The case is built around an organizational objective of increasing the profitability of a restaurant chain and the diverse ideas and situated activities performed in pursuit of that objective. The profitability of the restaurant chain is based on the menu’s inherent profitability, and that menu included both high- and low-margin dishes. The propositional knowledge of the planning and accounting system

met the criteria of conceptual coherence and correspondence. As Ahrens and Chapman point out, from a financial point of view, focusing selling efforts on high-margin dishes seemed the right path to follow; however, the sales managers argued that focusing on these items would have a negative impact on the overall eating experience of the customer, as customers would *feel* they had been overcharged and not return again. Thus, it was the interaction between the experiential and propositional knowing during the weekly meetings that shaped the practice of the restaurant managers and their subsequent chain of actions.

Managers drew on appropriate metaphorical language which was commonly accepted and understood in order to create narratives for expressing their emphatic insight. For example, one of the most successful restaurant managers emphasized that a good customer experience can only be built on a strict concern for the quality of the meals presented, even if it resulted in what was termed a “food deficit”. The foundation of this is the chef, and “if you want a good chef you got to pay them a living wage” (Ahrens and Chapman, 2007, p. 17). The managers create a self-sustaining community within each restaurant that grows and matures over time: “you can grow or you can kill a business” (Ibid.). The sense of togetherness goes beyond the boundaries of commercial relationships as well: “we help them [the staff] out when they struggle and now they still rely on us” (Ibid). The case makes it clear that the performance management system was infused with a human emphatic and imaginal dimension, which materializes in a sense of phenomenological insight.

One prerequisite for creating commitment to new ventures is the individual’s emotional attachment to the venture. In Ahrens and Chapman’s case the most successful managers were being portrayed as carrying and emotionally investing themselves in the management process. They leveraged ‘carrying’ emotional working, an affective practice (experiential knowing process) that has been replicated with same degree of success in multiple locations. We ascribe this practice to a high awareness of the importance of activating the participatory functions, which in turn generates the feeling of indwelling.

The actions were unpredictable and distributed over people, spaces, processes, and information. The restaurant managers were encouraged to provide a narrative of these fluid actions which were further precipitated in indicators and financial measures (Ahrens and Chapman, 2007). However, the bracketing process managed to link the sales managers’ experience to the menus and controllers’ targeted profit margins on dishes. By developing a vocabulary accessible to all, organizational actors integrated and infused the two ways of knowing in the same construct causality of performance

management. When the narrative of the actions was provided, the unpredictability did not trigger anxiety and frustration, but acceptance and understanding. This articulation of experiential knowledge through the narratives created engagement with objectives, uses, and emotions; an engagement that gave meaning to the organizational actions. The users of performance measurement were nurturing the being in relation and empathic engagement with the object of knowledge.

In sum, the performance system was phenomenologically grounded and the conceptual knowledge of the planning and accounting system met the criteria of conceptual coherence and correspondence. Accordingly, they provided well-considered a-priori knowledge and analysis of the integration of facts, possibilities, values, and communication and hence the performance management system was proactive true. In addition, it produced chains of pragmatic true chains of actions.

Ahrens and Chapman conclude, “the key to understanding practices lies in the careful tracing of their constitutive activities” (2007; p. 23). Such activities are purposeful and deemed to construct understandings, rules and engagements. They call for theoretical frameworks that are able to provide the vocabulary and space to discuss the fluidity and unpredictability of management control practice. We argue that the proposed framework provides a tool to conceptualize the constitutive activities (affective, imaginal and conceptual) in a detailed manner and also brings together, and makes sense of, apparently ad-hoc and fluid activities by highlighting the equal importance of all ways of knowing in constructing functioning activities.

The current research has up to this point focused on highlighting the epistemic processes of creating and the interaction among the different ways of knowing in the context of management accounting. We have tried to show that the application of the framework could enrich the understanding of management accounting practice by increasing the granularity of the constitutive actions, and it has provided a vocabulary to grasp the affective side of the practices through experiential knowing. It also provides a structure for analyzing the resulting chains of actions based on the integration of the four ways of knowing, which could contribute to a better understanding of the apparent fluidity and so-called ad-hocracy found in management accounting practice. However, as mentioned in the theoretical framework, all these processes are possible only through the nurturing of the view of an object of inquiry as an epistemic object. This understanding of the unfolding ontology must go beyond conceptual understanding, it needs to be embraced in the attitudes toward and in the interaction with the knowledge object.

Next, we analyze a case study presented by Vaivio (1999) in which the intertwining of these various ways of knowing was not achieved, leading to the inability of the organization to develop valid knowledge upon which to envision meaningful and coherent chains of action.

CASE 3 – Separation of modes of knowing

Vaivio's (1999) case study of the cleaning division of Unilever provides a rich account of how the commercial controller transforms the customer into a calculable space through systematic, quantified metrics. This new form of knowledge comes into conflict with the more fluid, ad-hoc, and detailed form of knowledge provided by sales managers. Vaivio's aim was to show how this new calculable space shifted the power from one organizational form to another and how the resistance of sales managers materialized within the organization.

Interpreting Vaivio's case study from the point of view of the epistemic practice framework, we can see an illustration of how exclusive use of either experiential knowing or propositional knowing cannot enable and sustain functioning practices, and how a lack of awareness causes incoherent chains of action and confusion, with a negative impact at both the individual and organizational level.

The epistemic object—the constructs deemed at representing the customer—in its unfolding ontology, presented multiple manifestations, including trade relations and micro-business practices, negotiation relationships, invoice inquiries, quality complaints etc., each produced by different ways of knowing (Vaivio, 1999). The experiential knowing advocated by sales managers, is the outcome of frequent personal interactions with customers and the amount of time spent in the field (Vaivio, 1999). It provides a rich experience of the customer, based on small details that are both visible and invisible. “The sales customer was based on a myriad of minor business practices, on intrinsic market conventions, and on the needs of a common and less glorious trade” (Vaivio, 1999). The sales managers construct was rooted in their knowing of the customer upon explicit demands, but also in their feelings upon interacting with them, which cannot be pinpointed, namely on hunches and gut feelings (Vaivio, 1999). Such knowing was expressed and shared through fluid and broad narratives; however, the loose bracketing led to a weak form of declarative proof that the rest of the organizational actors could not grasp. This further led to controllers rejecting the validity of the sales managers' ways of knowing and their construct causality in relation to the customer. The experiential knowledge gave the impression of an intentionally mystified knowledge, where meaning was hidden from the rest of the organization with the aim of obtaining power.

Sales managers' actions were perceived as being driven by emotions and they were accused of creating hazards, rather than being driven by reason, which would have created order: "the sales manager often got emotional about problems that happened yesterday...we were a bit of a mess, not giving the customer the sort of service they wanted. Some sort of coordination, harmonization, and standardization was needed...The company should move beyond ad-hoc approaches" (Vaivio, 1999, p.694).

The lack of experiential knowing on the part of controllers corroborated with sales managers' poor presentational knowing, lead to difficulties in achieving coherence and transparent logics in the chain of actions. By not utilizing narratives anchored in concepts acknowledged by the rest of the organizational members (i.e., presentational knowing), sales managers caused confusion and dissatisfaction among operational members and distrust among controllers.

In response to this situation, the controller tried to replace experiential knowing with propositional knowing by looking mostly at the precipitate of the customer experience, the quantifiable dimensions: "something realistic, acceptable and meaningful. You have to build in measurements into the business, otherwise you don't cope with change. Without measurements you can be happily going on and not be concerned" (Vaivio, 1999, p. 694). Although no direct interaction was taking place between the controller and the customer, the controller believed that "the measures come from the customer" and the measures showed "how the customer would judge us [the organization]" (Vaivio, 1999, p. 696). However, not having any contact with the customer and not involving sales managers (the receptacles of the experiential knowing) in designing the measurement process, the initiative of the case firm—known as the Quantified Customer Initiative—resulted in "spending too much time analyzing the situation to death...It produced paralysis by analysis" (Vaivio, 1999, p.707). The resultant construct causality incorporated only propositional knowledge without any phenomenological grounding therefore it could not be acted upon.

Overall, instead of maintaining an inclusive approach, being open and having an empathic engagement with the phenomenon, the controllers and sales managers fostered a dissociative approach, which resulted in a competition between the validity of the different types of knowledge. The results were a performance management system that lacked a phenomenological grounding. Accordingly, there was poor a-priori knowledge and analysis of the integration of facts, possibilities, values, and communication and hence the performance management system lacked proactive truth.

The cause was a dysfunctional performance management model. It did not facilitate the intended results; in other words, the pragmatic truth was poor. For example, the way in which the propositional knowing was mobilized: instead of pointing to solutions, irritated the organization's members by constantly measuring and analyzing any underperformance: "The quantified customer would be mobilized as a permanent exercise in discomfort" (Vaivio, 1999, p.696). As the staff were constantly reminded of their failures, the strategy undermined the experience of work and employees' motivation. Furthermore, because the experiential knowing was not the basis for the propositional knowing, it created a chain of actions that had very little impact on (and even neglected) areas of importance because they were statistically insignificant: "I want to know why one of our customers is not receiving a product. This [the measurements] information was not helping me much" (Vaivo 1999, p.705). As Vaivio pointed out in the same work, the numbers became proxies for something subtler that could not be quantified.

Vaivio demonstrates very well how the shift in the use of different types of knowledge affects the power balance between two groups of stakeholders, and how ultimately the organization returned to the situation in which "the sales are now judge and jury" while the "quantified customer had been granted an honorable retreat" (Vaivio, 1999, p. 709).

Vaivio's case study seems not only to depict a power struggle but also an attempt to improve an organization's performance through harnessing two different types of knowing. Employing the epistemic practice framework as a basis for analysis enriches the understanding of the case by pointing toward the causes of these malfunctions and suggests theoretically-grounded ways to overcome them. We would argue that the in-thought community formed around the epistemic object—the customer—failed to maintain openness toward the object and its multiple instantiations (Cetina, 2001). Had the two types of knowing been mutually inclusive, the chain of actions would have benefited from more coherence, the logic of events would have been rendered visible, and therefore the actions demanded could have acquired legitimacy in the eyes of operational teams. Had an arena of interactive communication been provided in the midst of the sales managers, controller, and operational team, the outcome could have been a performance management model built on both the experiential knowing (of the sales managers) and propositional knowing (of the controller), that would certainly result in a proactive true construct causality .

Not being aware of the different types of knowing creates a dissociative and exclusive attitude toward others, leaving the organization with two unsustainable solutions. However, cultivating awareness of

the unfolding nature of the epistemic object can nurture an inclusive attitude, which could lead to a solution infused with both experiential and propositional knowing and disseminated through presentational knowing. In this way the force of resistance is transformed into a source of growth.

4. Concluding remarks

The present paper contributes to the scholarly dialogue on the way management accountants can construct themselves as reflective practitioners in relation to the organizational reality by producing construct causalities that enable functioning practices.

Actors' empathic engagement with the epistemic object has an important role in producing construct causalities. Such engagement is achieved by activating the participatory function, which shifts the focus from the self to the other and the outer context. This allows actors to attune themselves to the backtalk of various materials, identify facts, and envision possibilities that would help them pursue their values. Empathic engagement is crucial for the integration of these elements and even more for producing a narrative that is able to communicate the rationale and embedded values of the construct causality in a way that resonates with others and empowers them to participate in action if they so wish.

We have shown how applying the framework has the potential to help researchers scrutinize the constitutive activities of organizational practice. We have highlighted how the affective and cognitive dimensions of practice can be traced and linked through the analysis of learning-in-relationship. The analyzed articles show how the affective dimension comes into play in producing practices that work and how actors. By tuning to the backtalk of the materials around the epistemic object, actors acquire a phenomenological grounding, which, combined with presentational, and propositional knowing, can drive the development of constructs that are pragmatic truths.

The importance of epistemological validation is highlighted particularly through the analysis of Vaivio's (1999) case study, where the application of the framework reveals a dimension of the case study that was not explored in the original interpretation. Specifically, we show how a lack of integration between the ways of knowing hinders the development of functioning practices. Our interpretation of the case shows how relying exclusively on experiential knowing can impede the harmonious and transparent integration of the logics governing organizational processes. At the same time, relying exclusively on propositional knowing would entail practices detached from the phenomenological reality of the organization. Having a strong attachment to either one alienates the

communication between various actors leading them into conflicting situations. The lack of dialogue lures actors into believing that the only way to solve the conflicts is by impinging upon another actor. When that happens all learning opportunities evaporate.

Extant literature investigating this topic has provided a rich vocabulary for describing the individual characteristics required by this role (e.g., passionate humility, empathic engagement, learning orientation) however the processes by which these qualities are nurtured and sustained in practice are not discussed in detail. Furthermore, neither the epistemological implications of enacting the reflective practitioner role, nor the reflective practices involved have been addressed in the extant literature.

The present paper addresses these aspects by conceptualizing a framework that offers a methodology for tracing the cognitive and affective micro-processes available to actors to leverage for creating epistemic practices. More importantly, we include a discussion on the epistemic validation of the knowledge that such processes entail. Drawing upon pragmatic constructivism, we point out that from a pragmatic point of view, being reflective means being able to perceive and integrate various elements of organizational topoi to produce construct causalities triggering chains of action that achieve the desired results, that is, that produce construct causalities that are pragmatic truths.

The framework is exploratory and accordingly there are still many aspects of these activities to be investigated. Future research could focus on the cultivation of learning attitudes by increasing humility and eliminating the anxiety that comes along with the feeling of not knowing. Another avenue for research could be the micro-processes that would allow an increased comprehension of the concept of unfolding ontology and its implications for the way actors relate to knowledge objects and to each other.

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