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CASE STUDY & TEACHING

"Is Management a science?": epistemology as a path for this reflection

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Abstract

The teaching case unfolds in a course entitled "Epistemology of Management Research," part of the Academic Doctorate program in Management at a renowned university. The central dilemma of the case aims to trigger a critical analysis of the scientific nature of Management, given its multidisciplinary nature, and how the epistemological approaches/dimensions typically practiced in our field can support such a reflection. Students are introduced to different epistemological approaches/dimensions, including Positivism, Functionalism, Structuralism, Dialectical and Historical Materialism, Phenomenology, Hermeneutics, and Pragmatism. Each offers a distinct perspective on the nature of knowledge and scientific research in Management. As they engage with the topics discussed throughout the course, students are encouraged to use the epistemological content learned to underpin discussions involving the dilemma: "Can Management be considered a science?" The teaching notes aim to stimulate discussions and learning about the epistemological approaches/dimensions in their characteristics, criticisms, and limitations; notions of objectivism and subjectivism; and the construction of arguments about the scientific nature of Management from an epistemological standpoint.

Keywords: Epistemology. Management science. Scientific field of Management. Scientific research in Management. Teaching case.

"Afinal, a Administração é ou não é ciência?": A epistemologia como caminho para essa reflexão

Resumo

O caso para ensino se desenvolve em uma disciplina denominada "Epistemologia da Pesquisa em Administração", integrada ao programa de doutorado acadêmico em administração de uma renomada universidade. O dilema central do caso tem como objetivo provocar uma análise crítica sobre a cientificidade da Administração, dada sua natureza multidisciplinar, e como as abordagens/dimensões epistemológicas usualmente praticadas em nosso campo podem amparar essa reflexão. Nesse sentido, os discentes são apresentados às diferentes abordagens/dimensões epistemológicas, incluindo Positivismo, Funcionalismo, Estruturalismo, Materialismo Histórico e Dialético, Fenomenologia, Hermenêutica e Pragmatismo. Cada uma delas oferece um olhar distinto sobre a natureza do conhecimento e da pesquisa científica em Administração. Ao interagirem com os assuntos abordados ao longo da disciplina, os discentes são incentivados a utilizar conteúdos epistemológicos aprendidos para fundamentar as discussões que envolvem o dilema: "A Administração pode ser considerada uma ciência ou não?". As notas de ensino buscam estimular discussões e aprendizados sobre as abordagens/dimensões epistemológicas em suas características, críticas e limitações; noções de objetivismo e subjetivismo; e a construção de argumentos sobre a cientificidade da Administração fundamentados na epistemologia.

Palavras-chave: Epistemologia. Cientificidade da Administração. Campo científico da Administração. Pesquisa científica em Administração. Caso para ensino.

"Después de todo, ¿es la Administración una ciencia o no?": La epistemología como camino para esta reflexión

Resumen

El caso de enseñanza se desarrolla en una asignatura denominada Epistemología de la Investigación en Administración, integrada al programa de Doctorado Académico en Administración de una universidad renombrada. El dilema central del caso tiene por objetivo desencadenar un análisis crítico sobre la cientificidad de la Administración, dada su naturaleza multidisciplinaria, y cómo los enfoques/dimensiones epistemológicas usualmente practicados en nuestro campo pueden respaldar esta reflexión. En este sentido, a los estudiantes se les presentan los diferentes enfoques/dimensiones epistemológicas, incluyendo Positivismo, Funcionalismo, Estructuralismo, Materialismo Histórico y Dialéctico, Fenomenología, Hermenéutica y Pragmatismo. Cada uno de ellos ofrece una mirada distinta sobre la naturaleza del conocimiento y de la investigación científica en Administración. Al interactuar con los temas tratados a lo largo de la asignatura, se incentiva a los estudiantes a utilizar los contenidos epistemológicos aprendidos para fundamentar las discusiones que involucran el dilema: "¿Puede considerarse la Administración como una ciencia, o no?". Las notas de enseñanza intentan estimular discusiones y aprendizajes sobre los enfoques/dimensiones epistemológicas en sus características, críticas y limitaciones; nociones de objetivismo y subjetivismo; y la construcción de argumentos sobre la cientificidad de la Administración a partir de la epistemología.

Palabras clave: Epistemología. Cientificidad de la Administración. Campo científico de la Administración. Investigación científica en Administración. Caso de enseñanza.

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INTRODUCTION

The academic year was beginning, and the students were excited about taking the subject "Epistemology of Management Research" in a doctoral course in Management offered at a renowned university. The professor who would be teaching the course was held in high esteem by the academic community, as well as being recognized for his expertise and ability. The syllabus itself seemed interesting, as it dealt with topics such as ontology, epistemology and methodological aspects of theoretical and applied research in Management. The various epistemological approaches/dimensions set out in that document would certainly cause good debates throughout the course. The road would be long, perhaps tortuous, but rewarding for everyone. But let's start at the beginning, with the syllabus (Box 1).

Box 1
Syllabus for the subject "Epistemology of Management Research"

Syllabus: Philosophy of the Social Sciences. Ontological, epistemological and methodological aspects of theoretical and applied research in Management. Epistemological approaches/dimensions in the Human and Social Sciences. Scientific revolutions and their implications for Management. Basic conditions for knowledge construction in an applied Social Science such as Management. Scientificity of Management as a field of knowledge. The nature and effectiveness of Management research. Contemporary discussions on epistemology.

Source: Research data.

Considering the contents of the syllabus, the subject aimed to contribute to the development of students' training as future researchers and academics, placing them – albeit not exhaustively – in the history of ideas, concepts and human thought that has subsidized and continues to subsidize the scientific enterprise. The aim was to develop some of the competences listed in the teaching plan, according to that objective. Thus, at the end of the course, students were expected to (Box 2):

Box 2
Skills developed during the course

- Understand the importance of Philosophy – particularly the Philosophy of the Social Sciences – in Management studies and scientific research.
- Understand the foundations of the epistemological approaches/dimensions – both historical and contemporary – that exist in the Social Sciences and Humanities.
- Understand the purposes, possibilities and limitations of the epistemological approaches/dimensions derived for Management that guide the scientific research practiced in this field.
- Critically reflect on the conditions for knowledge construction in Management, based on managerial and organizational scientific research, considering relevant objects and problems, based on the appropriate epistemological approaches/dimensions in this scientific field.

Source: Research data.

After reading the syllabus and the skills to be developed along the course, the students realized that the subject would require a great deal of thought and knowledge of many areas, which had to be studied in an articulated fashion. At the start of the course, the methodological dynamics were explained. The class was divided into pairs, and each would be responsible for preparing and delivering a seminar in which they had to discuss an epistemological view among those considered to be the most present in the world of Management research. The introductory lectures showed how a Social Science needs to theorize, since one of its objectives is to provide causal explanations for the events studied that may be shared by some contexts or even singular events that require a widely accepted "law" or "truth" to understand.

The texts worked on (Box 3) led students to understand that, like other institutionalized activities, the practice of scientific research legitimizes and presupposes particular ways of engaging with, observing, and talking about the world. Other questions explored permeated issues such as: is there a fundamental/initial/primary Social Science? What is it? Is it possible to reduce all social studies to a single type (such as Economics, Psychology or Sociology)? If so, what about the interdisciplinary nature of certain Social Sciences, such as Management? What kinds of entities and processes populate

the social world and what kind of knowledge do we have about these things? Are there universal social laws? Is there a specific ontology of the "social"? Is there, consequently, an epistemology best suited to explaining the "social"? The readings that prompted these questions were:

Box 3
References for the introductory classes

Fay, B., & Moon, J. D. (1977). What would an adequate philosophy of social science look like? *Philosophy of the Social Sciences*, *7*(3), 209-27.

Turner, S. P. (2006). The philosophy of the social sciences in organizational studies. In Clegg, S. R., Hardy, C., Lawrence, T. B., & Nord, W. R. (Eds.), *The SAGE handbook of organization studies* (2a ed., pp. 409-24). London: Sage Publications.

Tsoukas, H., & Chia, R. (2011). Introduction: why philosophy matters to organization theory. In Tsoukas, H., & Chia, R. (Eds.), *Philosophy and organization theory* (Research in the Sociology of Organizations, Vol. 32, pp. 1-21). Bingley: Emerald Group Publishing Limited.

Source: Research data.

Some reflections on **ontology** have emerged – in this case, an area of philosophy that deals with what there is to know about a phenomenon and its nature, in simpler terms, what there is in the world to know. In Management, ontology can be used to understand the different dimensions of organizational reality, including the object "organization" itself, taken as an entity, for example. **Epistemology** regards how we can build scientific knowledge about something – among the different forms of knowledge possible. This was explained as the domain used to understand a social reality, so that it is possible to develop models, explanations, scientific theories, or even technological, practical, and experiential solutions. It was discussed that, in Management, epistemology can be used as a guiding foundation to produce scientifically coherent, consistent and reliable knowledge, enabling validation in the practical organizational field, as well as legitimization in the academic field.

After a few introductory classes, the seminars soon began. The first was on **Positivism**. The students in charge presented the main points of this view, which focuses on the connection between data and theoretical laws. For this approach/dimension, reality is constituted through the observation of facts, correlation and experimentation. Auguste Comte was one of its exponents – along with Claude-Henri de Saint-Simon, Herbert Spencer, and John Stuart Mill – and, for him, the phenomenon (that which can be evaluated, measured, observed, and confirmed) shows itself exactly as it is in its appearance and can be observed through empirical reality. This epistemological position defends the application of methods based on the natural sciences when analyzing social phenomena that are observable and measurable through an objectivist conception of reality. According to the methods used, all knowledge is objective and results in laws that guide social interactions and can explain regularized human behaviour. The pair showed that both generalization and determinism are central components of positivist organization theory, which aims to produce knowledge based on general causal laws.

The second seminar dealt with **Functionalism**, and the presenters talked about the idea of functioning systems, the perception that regularity underpins the component elements of empirical social reality and the question of what something functional is. According to the objectivist vision of Émile Durkheim, Alfred Radcliffe-Brown, Bronisław Malinowski, Talcott Parsons, and Robert K. Merton, who studied stable phenomena, patterns of behaviour, values and social relations, personality, culture, among other elements, Functionalism would focus on investigating the functions of component parts of social systems, as well as social systems *per se*, within the scope of social reality. Functional relationships permeate individuals, social institutions and society in a macro-social focus. In Management, the functionalist vision is put into practice through techniques and methods that must be applied to achieve organizational objectives and manage process efficiency, thus meeting society's needs. Work focused on efficiency and organizational growth strategies, with consumer research, is gaining relevance, and its focus is on contributions to the stability and survival of the systems being researched, one of which is the organization.

The third seminar presented **Structuralism**, which would be the set of relational systems reflected as phenomena that depend on each other, that is, they seek a relational approach that brings meaning through models and their predictability. Ferdinand de Saussure's edifying lessons with linguistic structuralism were exposed in his binary opposites: "language × speech", "signifier × signified", "synchrony × diachrony" and "syntagma × paradigm". Claude Lévi-Strauss' Structuralism emphasized the relationships between elements that make up a given structure, through research that was also objectivist and did not involve the researcher, in order to understand not what is in the facts, but what the facts hide – the structuring structures of reality. His study includes the description and analysis of relationships and their synchronicity with reality. Other authors

who have studied Structuralism include Michel Foucault with Structuralism in History, addressing the relationships that existed at a certain time between the various fields of science, and Jacques Lacan with Structuralism in Psychoanalysis and the differences between need, demand and desire. It was highlighted by the students that organizations, managerial models and social configurations also have their deep structures – not the formal, explicit ones, such as those laid out in organization charts, for example – which are exactly what Structuralism wants to bring to light, along with the possibility of conceiving explanatory models based on the traits of the structures that reproduce themselves, building social reality.

The fourth group addressed the **Historical and Dialectical Materialism** of Karl Marx and Friedrich Engels, discussing the contradictions of human actions and thought. Thus, reality would be understood and explained by capturing its contradictions, having a material and objective origin, based on the modes of production in which man participates to provide for his needs. Marx talked about the surplus and exploitation that permeate productivity, as well as the alienation prevalent in labour relations and economic relations as the primary social domain. Class conflict is shown to be inevitable because of the stratification caused by capitalism as an established political-economic-social system, which should be overcome by another system, communism, passing through an intermediate stage, that of socialism. Historical-materialist approaches, which were possible by dialectics as a movement of totality, would be fundamentally critical-reflexive, and were guided by intentions to denounce and emancipate the negative social, political, and economic consequences of that system for human beings and society. By exposing the contradictions and underlying mechanisms, they highlighted inequalities, power relations, control, and exploitation, helping to understand both action within organizations and interaction with society on a broader level – their ideology – contributing to a, if not revolutionary, reformist theory of organizational transformation.

The next seminar looked at **Phenomenology**, which was developed by thinkers such as Franz Brentano, Edmund Husserl, Max Scheler, Georg Wilhelm Friedrich Hegel, Maurice Merleau-Ponty and Alfred Schütz, among others, as this approach/dimension unfolded in different strands and variations throughout the 20th century. It presumes a universality of essence, through experiences and meanings. It is conceptualized as a discourse about what is shown (the objective dimension of reality) and to whom it is shown (the subjective dimension of reality), never denying reality, but rather direct and immediate access to it. By way of explanation, reality, and access to it are always the result of mediations by the subject in the social, according to the intentionality of their consciousness in their experiences. Phenomenology emphasizes experiences through its method of reductions – phenomenological ("*epoché*"), eidetic and transcendental – which is what would allow access to and apprehension of the essence of the phenomena that appear to consciousness.

Thinking about Management, assuming that subject and world are always intertwined, it was commented that Phenomenology would seek to study how people experientially construct their reality amid everyday practices and how they share it with other people in processes that allow it to be intersubjectively sustained. The social field would thus be the arena of collective experiences and the construction of knowledge about phenomena that reach and manifest themselves in organizations: identities, meanings, and various issues in which the subjectivity of individuals matters.

The following week, we talked about **Hermeneutics**, strongly linked to the works of Friedrich Schleiermacher, Wilhelm Dilthey, Martin Heidegger, Paul Ricoeur and Hans-Georg Gadamer, which seeks to interpret meanings through text, context, and representation. The text emerges as a representation of the action, which becomes a structured reference for a plurality of other actions that are open to interpretation. The idea of truth as a single and/or universal "salvation stone" is replaced by the circumstantial idea of justification, i.e. the arguments, intentions and purposes that constructed the texts.

For our field, the use of Hermeneutics would have the potential to provide deep insights into organizational phenomena, and the hermeneutic effort would consist of an attempt to clarify – or make sense of – some organizational phenomenon in its particular social and cultural context. The students commented that the construction and attribution of senses and meanings (sensemaking and sensegiving) resulting from social interactions and relationships gained relevance along with the role of language in discursive, narrative, and communicational analyses, pointing to themes such as symbolism, culture, strategy, and technological artifacts.

The series of seminars ended with **Pragmatism**. In this dimension – which is historically associated with names such as Charles Sanders Peirce, William James, John Dewey, Donald Davidson and Richard Rorty (the latter considered a neopragmatist) – everyday problems bring knowledge, and there is no absolute truth. Pragmatism has an anti-dualist stance, understanding that facts are intertwined, and truths are mutable, occurring in the results of practical actions, with dynamics and movement

considered important aspects. The subject and reality are integrated, overcoming the objectivism-subjectivism ontological dichotomy, based on research guided by abductive reasoning.

Imagining all theory as derived from practice, Pragmatism turns its gaze to learning processes, to the role of reflection, to communities of practice, with its focus on lived experience and the view of problems from within themselves. There is no need here to generate eternalized definitions or immutable points of view; for pragmatists, the entire universe of knowledge is valid in some context, and it is up to the researcher to situate their study according to their needs and understanding of reality.

The end of the semester came, and the students were able to delve into various epistemological paths in an intriguing way and with many enriching discussions. This overview of epistemological approaches/dimensions provided by the teacher would work as a kick-start for the students to discuss the scientificity of Management, because if Epistemology designates "the critical study of the principles, hypotheses and production of knowledge of the various sciences, focusing on their cognitive structure, value and objectives of scientific knowledge, its characteristics, its delimitations, as well as the methodological processes of each area" (Araújo, 2012, p. viii)[1], then it would make sense for such a critical study to also turn to our scientific field. To assess whether the class had absorbed the content and to continue with the course after various discussions, the teacher asked the students to carry out a simulated jury in order to debate the following questions and reflect on them: **Can Management be considered a science or not? How can Epistemology, as worked on in the subject, support this reflection?**

In this context, the class was divided into two large groups, each of which had to present arguments in defense of one of their positions in up to 20 minutes. To guide the discussions, the teacher suggested that the students could use the following texts as a basis (Box 4):

Box 4
Suggested references to support the simulated jury activity

Drucker, P. F. (1986/2011). Can management ever be a science? In Drucker, P. F. *Technology, management, and society: Essays by Peter F. Drucker* (pp. 163-170). New York: Routledge.

Mattos, P. L. C. L. (2009). "Administração é ciência ou arte?" O que podemos aprender com este mal-entendido? ***Revis****ta de Administração de Empresas, 49*(3), 349-60.

Serva, M. (2013). O surgimento e o desenvolvimento da epistemologia da administração – inferências sobre a contribuição ao aperfeiçoamento da teoria administrativa. *Revista Gestão Organizacional, 6*(3), 52-64.

Source: Research data.

Before starting the discussion, the class agreed that, when conducting scientific research in Management, it is necessary to base oneself on some clear epistemological approach/dimension that supports the understanding of the theoretical and methodological assumptions that deal with the investigation and field study. In addition, it reflected on the challenge arising from the fact that social phenomena are considered complex and can be influenced by variables that go beyond objectivity, often coming up against subjective and contingent issues.

With the "prosecution" initiating the debate (as is customary in a jury), Group 1 structured its rhetoric by claiming that Management cannot be considered a science, because the term "field" of organization studies would be used to describe something pre-scientific and that, due to its multi-paradigmatic nature, the process of refutation and evaluation of its scientificity is compromised. The group went on to say that if Management relies on other sciences (such as Economics, Sociology and Psychology) to support its theories, it cannot be considered a science, because it lacks its own distinctive and defining object, which it can research, study, and theorize about in a focused way, providing depth and density. In this respect, the absence of a specific object of investigation – on which it would have the authority to analyze and explain – would clarify the fragmentation of visions that is characteristic of Management, making it difficult to understand it as a demarcated science that revolves around a clear object. Furthermore, because it is such a heterogeneous area, Management uses many theories from other fields of knowledge to explain its phenomena; therefore, how can it be capable of possessing/developing an epistemology of its own? How does a dispersed community of scholars from various fields become a science?

[1] Araújo, I. L. (2012). *Curso de teoria do conhecimento e epistemologia*. Barueri: Minha Editora.

Next, Group 2 then began to argue that Management can indeed be considered a science, basing their arguments on the fact that Management has several consistent theories in its various domains, such as Marketing, Strategy, Finance, Human Resources and Operations (comprising Production and Logistics). At this point, it could be considered a science because it has its own articulated body of theory, through which it is possible to predict the results of the behaviour of its key players. They also argued that, since the 1980s, various authors have intensified studies in the area, deepening discussions about the field, its scientificity and the plurality of methods for producing knowledge considered scientific in Management. Finally, they agreed that for a scientific field to be demarcated and recognized, it must have an object of investigation that is central to it, and that distinguishes it from other scientific fields; in this case, it was argued that Management meets these criteria by having the practice of management – whether it is carried out/supported intra- or inter-organizationally – as such an object.

During the reply and rejoinder, Group 1 raised more reflective and critical questions than concrete answers that contradicted what was said by Group 2: does Management really need to establish itself as a science? What are the benefits of this assertion?

All this debate indicates that the discussion is far from over. The professor stated that these concerns will continue, and that it is simpler to see Management as a *soft science*, as it doesn't exactly fit into the so-called *hard sciences*. The class ended and each student was able to construct a position, but many continued to "smell a rat" thinking, rethinking, and questioning: **Can Management be considered a science or not? How can epistemology, as worked on in the subject, support such a reflection?**

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Samir Adamoglu de Oliveira: Conceptualization (Equal); Formal analysis (Equal); Methodology (Leadership); Visualization (Equal); Writing – original draft (Support); Writing – revision and editing (Leadership).

José Florentino Vieira de Melo: Conceptualization (Equal); Formal analysis (Equal); Methodology (Support); Visualization (Support); Writing – original draft (Equal); Writing – revision and editing (Support).

DATA AVAILABILITY

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