## Value Free And Value Laden

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**ABSTRACT**
Based on Max Weber's sociological viewpoint, the idea of value-free science stresses keeping a researcher's personal beliefs apart from their scientific investigation. This study looks at the continuous debate between value-laden science and the ideal of no values, especially in the domains of economics and management. Although objectivity is still a primary goal in scientific work, the research discovers through a qualitative literature review and bibliometric analysis using VOSviewer with Scopus data that values—ethical, social, and cultural—inevitably influence different stages of research, from topic selection to methodology and interpretation. Since organisational interests and underlying values frequently influence decision-making processes, the idea of neutrality in management is coming under increasing pressure. This study calls for a more thoughtful and morally responsible approach to research and organisational practice, highlighting the growing awareness among academics of the unavoidable presence of values in science.
*Keywords :* Management, Philosophy Of Science, Value-Laden, And Value-Free.

**ABSTRAK**
Berdasarkan sudut pandang sosiologis Max Weber, gagasan ilmu pengetahuan yang bebas nilai menekankan pada pemisahan antara keyakinan pribadi peneliti dengan investigasi ilmiah mereka. Penelitian ini melihat perdebatan yang terus berlanjut antara ilmu pengetahuan yang sarat nilai dan ilmu pengetahuan yang bebas nilai, terutama dalam bidang ekonomi dan manajemen. Meskipun objektivitas masih menjadi tujuan utama dalam karya ilmiah, penelitian ini menemukan melalui tinjauan literatur kualitatif dan analisis bibliometrik menggunakan VOSviewer dengan data Scopus bahwa nilai-nilai - etika, sosial, dan budaya - tidak dapat dihindari mempengaruhi berbagai tahap penelitian, mulai dari pemilihan topik hingga metodologi dan interpretasi. Karena kepentingan organisasi dan nilai-nilai yang mendasari sering mempengaruhi proses pengambilan keputusan, gagasan netralitas dalam manajemen semakin mendapat tekanan. Studi ini menyerukan pendekatan yang lebih bijaksana dan bertanggung jawab secara moral terhadap penelitian dan praktik organisasi, menyoroti kesadaran yang berkembang di kalangan akademisi akan adanya nilai-nilai yang tidak dapat dihindari dalam ilmu pengetahuan.
*Kata kunci:* Manajemen, Filsafat Ilmu Pengetahuan, Sarat Nilai, Dan Bebas Nilai.

## 1. Introduction

Whether science can be achieved without the intervention of values has been a recurring topic of philosophical discussion, particularly in social sciences. The discussion revolves primarily around the value-free ideal (VFI), a notion closely related to the life of German sociologist Max Weber. Weber asserted that it is crucial for scientists to separate their personal moral or political values from their scientific research in order to be objective and unbiased. In his view, while people are inescapably affected by cultural and social environments in establishing their worldviews, the inherent mechanisms of scientific investigation—including theory formulation, hypothesis verification, and evaluation of evidence—ought to be objective and free from outside values (Sikora, 2024).

The VFI asserts that non-epistemic values, including ethical, political, or social ones, ought not to intrude into the internal coherence and empirical grounding of scientific research.

Proponents of this concept maintain that scientific research must only be led by epistemic standards like coherence, simplicity, and empirical adequacy in a bid to make scientific knowledge universal and reliable (Stamenkovic, 2024). This view has, however, received strong criticism from post-positivist philosophers, science sociologists, and feminist scholars. They contend that research agendas, the interpretation of findings, and the general use of scientific facts are necessarily informed by values (Ward, 2021; Brown, 2024).

Critics argue that science can never achieve the status of value neutrality, particularly when evaluating the choice of research objects, methodological paradigms, and the implications of scientific findings. Feminist researchers have also drawn attention to how the VFI has historically obscured male-dominated and ideological assumptions in scientific research (Politi, 2024). In the same vein, Thorpe (2018) disputes the notion that quantitative research methodologies are achievable without values, observing that researchers' implicit assumptions and worldviews tend to dictate both hypothesis development and data interpretation. Within management science, the concept of value-neutrality is commonly linked with the aspiration for objective decision-making and decision-making based on empirical facts. Classical views, as epitomized by Harper (1973), advocated for analytical methodologies in managerial practice that eliminate subjectivity from operations. Nonetheless, contemporary research provides evidence that social, cultural, and moral values continue to play a critical role in decision-making in real-world management contexts (Arif Fakhrudin & Yuliadi, 2024). This is part of broader philosophical shifts to recognize the situated character of value-based knowledge creation in disciplines like economics and organizational studies.

The aim of the present study is to discuss the significance and limits with respect to the value-free ideal in modern scientific and managerial spheres. By integrating bibliometric visualization and philosophical analysis of data retrieved from Scopus through VOSviewer, this research seeks to examine discourse, application, and critique of value-neutral and value-laden paradigms in scientific literature. The research also considers the potential for objectivity in scientific practice while refusing to recognize the inevitable influence of values on the development of research methodology.

## 2. Literature Review

The idea of value-free science (VFI) is a fundamental principle of the philosophy of science, especially in the positivist tradition. Originating from the writings of Max Weber, the doctrine advocates the dissociation of individual, social, and political values from scientific inquiry. As Weber explained, in a bid to maintain the objectivity and integrity of science, scientists ought to refrain from normative judgments when carrying out empirical research. Value-free ideal strives to make scientific knowledge only dependent on empirical fact and rational reasoning, independent of any moral or ideological biases (Stamenkovic, 2024). Yet, there is an increasing amount of academic literature that challenges this notion. Feminist thinkers, sociologists of science studies comprising critical theorists contend that value-neutrality is neither achievable nor desirable.

Heather Douglas (2009) asserts that values inevitably influence scientific judgment, especially in areas involving uncertainty or potential harm—an argument further supported by the concept of inductive risk (Ward, 2021). In this context, decisions about which hypotheses to accept or reject are often guided by anticipated ethical or social consequences, suggesting that values play a legitimate role in the core of scientific reasoning.

Likewise, Stephen Jay Gould (1981) criticizes the earlier application of "objective" science in fields such as intelligence testing, in which cultural and social biases played a role in formulating and interpreting findings. Contemporary studies, including those by Birhane et al. (2022), show that machine learning research purporting to be neutral is in fact saturated with

normative assumptions that carry social effects in the real world. In business studies and management, Value Framework Indicator (VFI) has historically shaped the use of quantitative and analytical methods that have attempted to ensure objectivity in decision-making (Harper, 1973). This perspective is, however, criticized by scholars who highlight the intrinsically value-laden character of managerial action.

Management is more than a technically oriented function; it is also a tool for social regulation and is shaped by power and ideological factors. Likewise, Arif Fakhrudin and Yuliadi (2024) argue that management should not only prioritize efficiency and generating profits but must also take ethical and social aspects into consideration.

Business school and organizational studies scholarship has also moved to more critical and reflexive approaches. Contemporary management scholarship is likely to straddle both epistemic and non-epistemic values, holding scientific rigor and societal relevance together. The call for responsible science emphasizes transparency, inclusivity, and ethical sensitivity in scientific inquiry as well as practical application. Bibliometric research has backed these conceptual streams with proof of the growing significance of terms like ethics, sustainability, bias, and equity throughout the economics and management literature. Scholars have mapped the intersection of technical fields with value-laden subjects through the utilization of tools like VOSviewer, thereby validating that the lines between value-free and value-laden science are progressively getting blurred.Besides, bibliometric analysis indicates a growing trend of interchange of values among various disciplines. A study on literature mapping based on Scopus data using VOSviewer software revealed that disciplines like environmental science, business, and social sciences are becoming more inclined to adopt ethical and sustainability dimensions within their fundamental frameworks.

**Table 1. Distribution of Value-Free Related Articles by Subject Area**

| No | Subject Area | Documents |
|----|--------------|-----------|
| 1 | Medicine | 140567 |
| 2 | Biochemistry, Genetics and Molecular Biology | 89726 |
| 3 | Physics and Astronomy | 83606 |
| 4 | Engineering | 83490 |
| 5 | Chemistry | 76039 |
| 6 | Materials Science | 65963 |
| 7 | Agricultural and Biological Sciences | 41631 |
| 8 | Chemical Engineering | 36637 |
| 9 | Computer Science | 28172 |
| 10 | Mathematics | 27896 |
| 11 | Environmental Science | 25625 |
| 12 | Earth and Planetary Sciences | 20532 |
| 13 | Pharmacology, Toxicology and Pharmaceutics | 19972 |
| 14 | Energy | 15711 |
| 15 | Social Sciences | 15029 |
| 16 | Immunology and Microbiology | 11897 |
| 17 | Neuroscience | 7592 |
| 18 | Multidisciplinary | 7190 |
| 19 | Nursing | 7008 |
| 20 | Business, Management and Accounting | 6474 |
| 21 | Health Professions | 5652 |
| 22 | Arts and Humanities | 5531 |

| 23 | Economics, Econometrics and Finance | 5139 |
|----|-------------------------------------|------|
| 24 | Veterinary | 4467 |
| 25 | Decision Sciences | 3401 |
| 26 | Psychology | 2871 |
| 27 | Dentistry | 2651 |
| 28 | Undefined | 446 |

Source: Scopus, accessed March 2025

The data indicate that although empirical sciences lead in terms of published work, social science fields—economics and management—are at the heart of answering questions centered on values. Such fields are usually junctures where objective investigation converges with ethical as well as normative issues.

## 3. Research Methods

This research employs a qualitative-descriptive approach supported by bibliometric analysis to investigate the relevance and influence of the value-free ideal in scientific research, particularly within the disciplines of management and economics. The methodological framework is designed to combine theoretical exploration and empirical data visualization, enabling both conceptual clarity and evidence-based insights.

## Research Phases

The study was conducted in several systematic stages as follows:

1. Problem Identification

The research began with the recognition of the philosophical dilemma of value-free versus value-laden science, particularly in applied social science fields such as management and economics.

2. Literature Gathering and Screening

Pertinent literature was obtained from academic databases such as Scopus, Google Scholar, and SpringerLink. The searching was informed by specific keywords as follows: value-free science, objectivity in science, management values, and epistemology in economics. The inclusion criteria were: articles between the year 2000 and 2025; peer-reviewed status In English or Indonesian language; Indexed by Scopus.

3. Thematic analysis.

Selected literature was reviewed critically to identify key arguments, conceptual frameworks, and critiques related to the value-free ideal. The analysis involved categorizing studies based on theoretical orientation, domain application, and critical perspectives.

4. Bibliometric Analysis using VOSviewer

To map the development of discourse in a visual format, bibliometric analysis was conducted using VOSviewer. Data was exported from Scopus, focusing on keyword co-occurrence, author co-citation, and thematic clustering. The minimum occurrence threshold was set to five terms per keyword to ensure clarity in visual mapping.

5. Synthesis and Interpretation

Then, bibliometric data were integrated with the results produced from literature review in order to examine patterns, shifts, and theoretical implications related to value manifestation in scientific studies and management practice.

**Research Flowchart**
The methodological framework followed here can be depicted as:
Analysis and Integration of Results Modeling and System Considerations Even though there is no use of a computational algorithm in the study, the bibliometric visualization is determined according to structured principles and clustering methods:
Identification of Research Problem
　　　　↓
Literature Collection and Screening
　　　　↓
Thematic Literature Review
　　　　↓
Data Extraction from Scopus
　　　　↓
Bibliometric Mapping with VOSviewer
　　　　↓
Network and Cluster Analysis
　　　　↓
Interpretation and Synthesis of Findings
Analysis Type: Co-occurrence of keywords and co-citation of authors. Analytical Unit: Authorship and key terms.
Threshold Parameters: At least 5 keyword mentions for inclusion in the mapping.
Visualization Objective: To reveal thematic relationships between value-neutral and value-laden research, particularly in management and economics.
This methodological framework ensures transparency, replicability, and academic rigor, supporting a comprehensive understanding of how philosophical ideals of objectivity are applied and challenged in contemporary research practice.

## 4. Results and Discussions
**Conceptual Trends in Value-Free and Value-Laden Research**
　　　The results of the literature and bibliometric analysis indicate a paradigm shift from the traditional value-free ideal toward a more value-laden approach in both scientific theory and managerial practice. The analysis affirms that while scientific objectivity remains a normative aspiration, in practice, epistemic and non-epistemic values play an inseparable role throughout the research process—ranging from problem formulation to interpretation of data.
　　　Thematically, contemporary researchers increasingly recognize the influence of social, ethical, political, and cultural values in shaping scientific outputs. This aligns with Ward's (2020) argument on inductive risk, where decisions regarding hypothesis acceptance are informed by value judgments about potential social consequences. Similarly, Politi (2024) asserts that the autonomy of science is inseparable from cognitive and normative diversity, emphasizing inclusivity in knowledge production.

**Bibliometric Visualization and Keyword Co-Occurrence**
　　　Using Scopus data analyzed through VOSviewer, the study generated a co-occurrence map of keywords related to the value-free/value-laden discourse in economics and management. The results revealed prominent clusters linking concepts such as "objectivity," "ethics," "management decision-making," "sustainability," and "social impact." This illustrates that the ideal of neutrality is now interwoven with growing concerns around ethical responsibility and socio-environmental considerations. The visual analysis also shows that keywords associated with value-laden themes—such as "bias," "equity," and "ethics"—have increased in frequency and density over the past decade, especially in management,

economics, and social sciences. This shift is supported by recent works that critique the presumption of neutrality in managerial frameworks and emphasize the ideological functions embedded in organizational decision-making.

**Cross-Disciplinary Patterns of Value Influence**

Table 1 presented earlier shows that although disciplines like medicine and physics dominate in volume, disciplines such as social sciences, economics, and business exhibit a more explicit engagement with value-laden concerns. This distinction underscores that fields dealing with human behavior, institutions, and policy tend to embrace reflexivity and transparency regarding the influence of values.

These findings echo critiques by Douglas (2009), who argue that scientific claims of neutrality often mask embedded biases, particularly in areas like artificial intelligence and machine learning. In alignment with these critiques, the current study confirms that even in economics—traditionally viewed as a positivist, value-free domain—researchers increasingly recognize the ethical implications of their models, predictions, and policy recommendations.

**Implications for Management Science**

In the field of management, the findings support the view that decisions are rarely neutral or purely technical. Instead, they are shaped by organizational values, stakeholder expectations, and institutional frameworks. For example, management as an extension of capitalist control mechanisms, arguing that it has historically served to discipline labor in line with elite interests.

Furthermore, business school research must critically reflect on its epistemic assumptions and strive for responsible science that acknowledges both internal (epistemic) and external (ethical, cultural, ecological) values. These reflections strengthen the position that management science cannot claim to be completely value-free. Rather, it must operate within a framework of value consciousness, particularly in areas such as sustainability, corporate governance, and social justice.

**Comparison with Previous Studies**

The current research aligns with previous findings in the literature but also advances the discussion by integrating a bibliometric lens. While previous scholars (Weber, 1922) upheld the pursuit of objectivity as a central scientific virtue, recent studies suggest this position is both idealized and insufficiently responsive to the complexity of modern social systems.

In contrast, modern researchers—such as Sikora (2024) and Stamenkovic (2024)—advocate for a more nuanced understanding of value influence, wherein transparency and methodological integrity coexist with ethical reflection. This study affirms such positions and highlights how bibliometric tools can trace the evolution of philosophical debates into measurable publication trends.

**Contributions and Theoretical Significance**

This research offers a multi-layered contribution it affirms that value-free science remains an ideal, but often impractical in contemporary, impact-oriented research.It reveals value-laden science as a growing norm, especially in fields that directly engage with human welfare, social structures, and ethical accountability, contributes to the theoretical discourse by visualizing how epistemological ideals shift over time, bridging classical philosophy of science with modern research practice.

**5. Conclusion**

This study concludes that the concept of value-free science, while philosophically significant, is increasingly challenged in practice, particularly within the fields of management and economics. The research findings demonstrate that values—whether epistemic or non-epistemic—inevitably influence various stages of scientific inquiry, including topic selection, methodology, data interpretation, and policy application.

The bibliometric analysis supports the argument that value-laden concerns are not only present but are becoming more prominent in contemporary academic literature. The integration of ethical, social, and environmental values into research reflects a paradigm shift toward more responsible, reflective, and inclusive science.

In the context of management, the study highlights that decisions are rarely neutral; rather, they are embedded with organizational, ideological, and ethical considerations. Thus, the ideal of value-free science may serve as a guiding principle, but not as an absolute standard.

The advantage of this study lies in its combination of theoretical discourse and bibliometric evidence, providing both conceptual clarity and empirical support. However, its limitation includes dependency on Scopus-indexed data and the scope of literature confined to selected disciplines, which may overlook broader interdisciplinary dynamics.

Suggestions

Expand the bibliometric scope by including databases such as Web of Science and Dimensions to capture a more diverse range of publications, conduct empirical case studies in specific organizations or industries to examine how values concretely shape research and managerial decision-making, develop frameworks or models that help integrate ethical and social values into scientific methodologies without compromising rigor and objectivity. Explore cross-cultural perspectives on value-laden science to understand how different philosophical traditions approach scientific neutrality and responsibility. By addressing these directions, subsequent studies can refine our understanding of the interplay between science, values, and practice—leading to more holistic and context-sensitive knowledge production.

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