The Realism Revolution: A Critical Review of Its Application in Library and Information Science Research in Pakistan

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Abstract
The study aims to analyze critically the application of realism in Library and Information Science Research. Realism is a theory in political science and international relations, primarily focusing on power and security. In library and information science (LIS), realism means that information objects, systems, and processes have a realistic basis, and can be studied as an objective reality. The objective of the study was to explore the philosophical foundations and to assess the practical implication of realism in LIS research. The content analysis method was employed in the study to gain valuable insight into the application of realism in library and information science research. The researcher selected the top most cited research articles in the field and analyzed them. The findings of the study revealed that realism is less implemented in library and information sciences research.

Keywords: *Realism, LIS Research;, Realist Thoughts;, Information & Knowledge;, Ontology;, Epistemology*

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Introduction:

Realism has always been present, whether in science or religion. Many realities existed even before the inception of this world. Throughout history, various Prophets have enlightened humanity about numerous realities. The Qur'an's dedication to truth enriches its narratives with a unique sense of realism. The Quran has revealed historical truths, the imperfections of the world, a balanced perspective, and its divine origins. Realism entails acknowledging events as they transpired. In the field of social science, "realism" represents a theoretical and philosophical standpoint emphasizing the existence of an objective reality separate from human experiences or interpretations. It asserts that social phenomena inherently exist, regardless of conscious awareness or perception. In essence, realism argues for a truth that exists independently of our subjective viewpoints (Reed, 2008). Realism underscores real-world limitations as opposed to an unattainable ideal, portraying a world of states in conflict primarily focused on security and the

pursuit of power for survival (Stein, 2001). Realism serves as the prevailing epistemological stance on nature in everyday life and academic research. It asserts the existence of a knowable reality (Proctor, 2001). Realism provides a social ontology that integrates social constructionism with an acknowledgment of the existence of measurable entities (Byrne, 2005). In philosophy, the perspective of "realism" attributes an independent existence or nature to known or observed objects, irrespective of human awareness or contemplation.

The Origins and Evolution of Realist Thought:

Realist thoughts stem from divine knowledge, which is considered true knowledge. Realism is based on genuine knowledge, as Klein (1983) defines it as "knowledge simpliciter plus a set of requirements that ensure the truth, belief, and justification conditions are not accidentally conjoined." The most reliable source of genuine knowledge is the Holy Quran, which contains great signs for those who reflect upon it. These signs are sufficient to unveil the truth. Realism is a theory in political science and international relations, primarily focusing on power and security. States constantly pursue power and security due to existing in a self-help system. In the 19th century, realism emerged in France as a response to the significant social changes brought by the Industrial Revolution. This movement emphasized the realism of subject matter by portraying more realistic depictions of everyday events in artwork (Britannica). In social science, realism enriches our comprehension of social events, phenomena, and social reality. Modern LIS research can adopt these principles to explore and address complexities in the field.

Realism In Library and Information Science Research:

When studying the definition of realism, realism is a philosophical approach that emphasizes that reality exists in an external world, which

has nothing to do with human experience and perception. In library and information science (LIS), realism means that information objects, systems, and processes have a realistic basis, and can be studied as an objective reality. By emphasizing measurable entities and bridging social constructivism with objective truths, realism provides a strong cognitive stance for understanding and organizing information (Proctor, 2015). The application of realism in library and information science research fosters the phenomena, structures, and mechanisms that can be researched objectively.

Objectives of the Study:

The following are the objectives of the study
  i. To explore the philosophical foundations of realism in LIS research.
  ii. To assess the practical implications of realism in LIS research.
  iii. To identify the strengths and limitations of using realism in LIS research.

Literature Review:

In the realm of social science research, "realism" encompasses the notion that the reality under scrutiny is separate from human perceptions and viewpoints. It is based on the belief that social occurrences are tangible, observable, and measurable. Various studies have been carried out to explore social phenomena through the lens of realism theory. A survey conducted by Pratschke (2003) delved into the realm of critical realism and statistical research methods in social science. The study examined the skepticism of critical realist philosophers of science regarding the utilization of statistical methods in social science research. Nor et al. (2011) assert that analyzing reality independently from our perspectives and interpretations is the essence of "realism" in social science research. Researchers can utilize it to delve into concepts and move beyond observable facts. Triangulation approaches such as methodology, data, investigator, and theory are employed to enhance validity and reliability

and bridge the gap between theory and empirical inquiry.

Theoretical Framework:

Realism clarifies the gap between the empirical and the real. Explores surface-level user interactions and gets involved in the in-depth social, cultural, and technological matters that shape information practices (Hjorland, 2004). The concept of "Layered Reality" in realism indicates that reality exists at multiple stages. These stages are experiential, actual, and real, 'experiential' means observed events, 'actual' is related to the events that happened whether they are observed or not, and 'real' is related to the basic mechanism and structure (Scott, 2005). In the field of library and information science, it is important to admire that consumer behavior (empirical) is influenced by the contextual factor (actual) and shaped by social structure (real). The realist thought challenge that information is a social construct which means that information has an objective existence doesn't require human interpretation and has implications for how we store and retrieve the information. In the study of library and information science the realist approach to causality by focusing on generative mechanisms informs the study of information behavior (Scott, 2005). It identifies the mechanisms that move the information-seeking and use that can help develop effective interventions that address the root causes and challenges of information-seeking and information need.

These mechanisms may consist of policies and technologies that shape access and retrieval to move beyond surface-level observations to address deeper, systemic issues.

Research Methodology:

Content analysis is a systematic approach for analyzing and interpreting communication features such as text, images, or audio, to identify patterns, and themes, and draw inferences based on the findings (Hassan, 2024). This study employed a content analysis method to gain valuable insights into library and information science research in Pakistan. Content analysis is an appropriate method to meet the study objectives. A thorough literature review was conducted to achieve the study objectives. To examine the practical implications of realism in library and information science research, the researcher analyzed the research publications of different LIS researchers in Pakistan. The researcher has selected the topmost cited research articles for library and information science research. The research articles were selected from Google Scholar, which was the most cited.

Sampled Articles:

The researcher has selected the following research articles to evaluate the applications of realism in LIS research.

Table 1

Sampled Articles

Sr.	Author and Title	GS Citations Score
1	"Khan, S. A., Bhatti, R. (2012). Application of social media in marketing of library and information services: A case study from Pakistan. Webology, 9(1)	261
2	"Awan, M. R., & Mahmood, K. (2010). Relationship among leadership style, organizational culture and employee commitment in university libraries. Library Management, 31(4/5): 253-266."	258
3	"Mahmood, K. (2016). Do people overestimate their information literacy skills? A systematic review of empirical evidence on the Dunning-Kruger effect. Communications in Information Literacy, 10(2): 199-213."	243

4	"Mahmood, K., & Richardson, J. V. (2011). Adoption of Web 2.0 in US academic libraries: A survey of ARL library websites. Program: Electronic Library and Information Systems, 45 (4): 365-375."	236
5	"Arif, M. & Mahmood, K. (2012). The changing role of librarians in the digital world: Adoption of Web 2.0 technologies by Pakistani librarians. The Electronic Library, 30 (4), 469-479."	191
6	"Tahir, M., Mahmood, K., & Shafique, F. (2010). Use of electronic information resources and facilities by humanities scholars. The Electronic Library, 28(1): 122-136."	154
7	"Bashir, S., Mahmood, K., & Shafique, F. (2008). Internet use among university students: A survey in University of the Punjab, Lahore. Pakistan Journal of Information Management & Libraries, 9: 49-65."	149
8	"Mahmood, K. (2003). A comparison between needed competencies of academic librarian and LIS curricula in Pakistan. The Electronic Library, 21(2): 99-109."	130
9	"Tahir, M. Mahmood, K., & Shafique, F. (2008). Information needs and Information-Seeking behavior of arts and humanities teacher: A survey of the University of the Punjab, Lahore, Pakistan. Library Philosophy and Practice (e-journal)"	115
10	"Richardson, J. V., & Mahmood, K. (2012). eBook readers: User satisfaction and usability issues. Library Hi Tech, 30(1), 170-185."	113

Inclusion Criteria:

The most cited library and information science research articles were included for analysis. Each article was checked on Google Scholar to view the citation score. Based on the following criteria the articles were included for analysis:

i. Article with top citation score in Google Scholar
ii. Published within the years 2000-2020.

Realism and Library & Information Science:

LIS research often exhibits antirealism, a tendency that is prevalent in the field. This antirealism is evident in research on relevance, knowledge organization, and information seeking and retrieval (Vakkari, 2024). For instance, our knowledge of reality is often produced by specialists in society, such as geographers, biomedical researchers, and zoologists. This antirealism is evident in the decision-making process of information systems, such as determining whether a certain substance is relevant as a cure for cancer. In medical research, the validity and relevance of a document claiming a substance is ultimately decided by medical professionals, not by users of information services. This central realist claims asserts that a given document may be relevant to a given purpose, regardless of the user's belief in its relevance. In recent decades, research in information science has primarily focused on user preferences and attitudes rather than the basis for knowledge claims in information systems. Relevance research assumes that information's relevance can be established by studying user criteria, which is an idealist position. However, this does not mean that experts should always trust experts, but rather that relevance is an objective phenomenon (Fremery & Buckland, 2022). Identifying what is relevant involves scientific arguments and epistemology. Information-seeking behavior has also been dominated by antirealist tendencies, as people have been given systems of information resources with potentialities at their disposal (Meho & Tibbo, 2003). However, all available knowledge may be useless, or relevant knowledge may be misjudged. Users' knowledge about these resources, evaluation, and utilization differs from their objective possibilities, and their information behavior should be interpreted

based on how they utilize these objective possibilities. The realist perspective on information behavior focuses on the subjective phenomena of users, while the antirealist or idealist perspective studies information-seeking behavior without considering objective possibilities. Information science has traditionally been an antirealist, partly due to the antirealist view of relevance, which considers relevance as users' criteria of relevance rather than an objective one (Hjorland, 2004). This perspective also reflects views related to users' query formulations and the system of information resources. From a realist perspective, users' questions and terminology may be more or less optimal in relation to given goals, reflecting their subjective views and not necessarily insight into the subject matter. Users subscribing to different theories or paradigms see things differently and formulate different questions. A question should be interpreted in relation to accumulated human knowledge on the issue (Scott, 2005). The system of information resources is not divided from the user in a dualistic way, as the user and the system are part of the same theoretical, conceptual, and linguistic environments. Different semantic distances play a role in this relationship, with the information system potentially containing relevant information and users' expectations about what information exists, where it exists, and what terms have been used to describe it. Historical research methods can provide some help in understanding the relative degree of realism in users' expectations, subject knowledge, and semantic distances between queries and documents. Research libraries and information centers should facilitate the use of primary information sources when appropriate, and the criteria for their collection and organization should not be based on user surveys or antirealist philosophy (Hjorland, 2004).

Table 2

Arguments With Description and Justification

Argument	Description	Justification
Existence of a Mind-Independent Reality	Realism posits that elements of reality, such as mountains or tropical fish, exist independently of human perception or belief.	This foundational claim ensures that LIS research is grounded in objective reality, providing a stable basis for understanding and organizing information.
Critique of Antirealism in LIS	Antirealism often implicitly dominates LIS research, prioritizing subjective phenomena over objective reality.	By focusing on subjective criteria, LIS research risks losing explanatory power and failing to address the true nature of information and its relevance.
Theory-Laden Observations	Observations in empirical research are influenced by underlying theories, challenging the notion that empirical data alone is sufficient.	Recognizing the theory-laden nature of observations helps in developing a more nuanced and accurate understanding of information systems and their functions.
Objective Nature of Relevance	The relevance of a document, especially in fields like medical research, should be determined by expert knowledge rather than user opinion.	Emphasizing objective relevance ensures that information systems deliver accurate and reliable information, crucial for critical fields and decision-making processes.
Domain Analysis	A method to reintroduce a realist perspective in LIS by emphasizing expert knowledge and interdisciplinary exchange.	Domain analysis validates and enriches research findings through the cumulative growth of knowledge across disciplines, promoting a more holistic understanding of information.

Challenges to Empiricism and Positivism	Realism distinguishes itself from empiricism and positivism, which are fundamentally antirealist and often neglect the theoretical basis of observations.	By challenging these antirealist positions, realism encourages LIS research to engage deeply with the epistemological foundations, leading to more robust and meaningful outcomes.
Objective vs. Subjective Information-Seeking Behavior	Realism stresses the importance of considering the objective possibilities provided by information resources, beyond just user behavior and preferences.	This approach ensures that information-seeking behavior is aligned with the actual capabilities and offerings of information systems, improving the accuracy and effectiveness of searches.
Resistance to Naive Realism and Extreme Constructivism	Realism maintains a balance, avoiding both naive realism and extreme constructivism and recognizes the resistance of reality to arbitrary conceptual frameworks.	This balanced approach prevents LIS from falling into overly simplistic or excessively relativistic views, promoting a more reliable and objective understanding of information.

Application of Realism in Top LIS Research Articles:

Table 3 presents the application of realism in LIS research. The researchers found that none of the studies employed realism as the theoretical framework. There is a gap in utilizing realism in LIS Research.

Table 3
Realism as a Theoretical Framework

Sr.	Citation	Realism as a Theoretical Framework	Research Focus
1.	(Awan & Mahmood, 2010)	Not employed	Organizational Culture, Employee Dedication, Leadership Style
2.	(Mahmood & Richardson, 2011)	Not employed	Web 2.0 Technology, Worldwide Web
3.	(Khan & Bhatti, 2012)	Not employed	Social media, Marketing of Library and Information Science
4.	(Arif & Mahmood, 2012)	Not employed	Web 2.0 Technology, ICT in Libraries
5.	(Tahir et al., 2010)	Not employed	Electronic Information Resources
6.	(Mahmood, 2003)	Not employed	Academic Libraries, Professional Competencies
7.	(Bashir et al., 2008)	Not employed	Internet Usage, Worldwide Web
8.	(Tahir et al., 2008)	Not employed	Information Need, Information Seeking Behavior
9.	(Richardson & Mahmood, 2012)	Not employed	eBook Reader, eBook Usability
10.	(Mahmood, 2016)	Not employed	Librarian Competency, LIS Curriculum

Findings and Discussion:

The study by Awan and Mahmood (2010) navigates the nexus between organizational
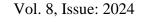
culture, employee dedication, and leadership style in university libraries. It delves into how organizational culture, employee dedication, and leadership styles manifest. The study does not employ realism as a theoretical framework, but some of the topics that were near to the realist approach are discussed in the study. The objectives aim to determine the impact of organizational culture and leadership styles on employee commitment, while the empirical examination aligns with the realist perspective by exploring the relationship between these factors and employee commitment. The article's conclusion, in line with realism, explores the interaction of these elements in university libraries. The research study of Mahmood and Richardson (2011) focuses on empirical evidence and practical practices of libraries implementing Web 2.0 technology. Realism as a theoretical framework is not employed in the research study. It concentrates on documenting the integration of Web 2.0 technology in academic libraries. Web 2.0 tools, such as instant messaging, podcasts, podcasts, instant messaging, blogs, microblogs, RSS, and social networking sites, are being used in university libraries. Hundred academic libraries in America were selected as a population. According to the research by Arif and Mahmood (2012), the devices are used to distribute news, provide information literacy training, collect customer feedback, and market services. Rather than discussing philosophical issues, the research focuses on practical applications of Web 2.0 technologies. Through an empirical study, information was collected from 100 university libraries. Allocating resources, engaging users, and providing training are some of the challenges facing libraries in implementing new technology. The research focuses on improving communication and library services. By being aware of the practical consequences of incorporating new technology, libraries can make informed decisions and benefit from the experiences of their colleagues. The study by Khan and Bhatti (2012) examines social media marketing strategies used by libraries and information centers to promote their resources and services. It studies how social elements influence marketing strategies and customer engagement techniques. The paper discusses the successful integration of social media with stakeholders such as consumers and local communities. Data analytics assess the results of these programs, helping librarians make informed decisions about effective uses of social media marketing. The article by Tahir et al. (2010) does not employ realism as a theoretical framework. This study emphasizes the use of technology by humanities scholars. The research investigates how Internet services and ICT are being adopted. This study discusses their opinions on the use of modern technology, reasons for preferring electronic resources over printed resources, and access to them. Mahmood (2003) examine the competencies and skills of future academic librarians in Pakistan. These include collection development, technical services, reference services, information services, ICT skills, and personnel management. The study does not apply realism as the theoretical framework. It may be because realism is not appropriate for this study. Even the study has not applied the competency theory which is appropriate for this study. The study also highlighted the importance of understanding technological issues, implementing information literacy enhancement programs, evaluating and monitoring library performance, familiarity with laws and policies, effective decision-making, and valuing diversity. It also emphasizes the need for librarians to understand and address legal and policy challenges, understand ethical and legal policy issues, and be aware of diversity. To effectively navigate and meet the challenges of the changing academic library landscape over the next five years, librarians must possess these skills. This article emphasizes the importance of these skills to meet the growing needs of academic libraries. The article, by Sakina et al. (2008) examines the Internet usage of undergraduate, graduate, and postgraduate students of the University of Punjab. They have not considered realism and

theoretical framework to be suitable for this study as realism focuses on the competitive and conflictual nature of international politics. The suitable theoretical framework for this study might be the Uses and Gratification Theory, Technology Accepted Model, and Digital Divide Theory. The study has not discussed the other suitable theoretical framework. The study indicates that students mainly use the Internet for study and research. However, the article also mentions some issues such as insufficient internet access and absence of ICT. The study by Tahir et al. (2008) examines the information needs and seeking behavior of arts and humanities teachers at Punjab University. Realism theory was not appropriate for this study as realism does not align with investigating the information need and information-seeking behavior of individuals. The study has not adopted a suitable theoretical framework such as Wilson's Model of Information Behavior, and Kuletha's Model. The study explored access methods, types of information needed, and challenges they face such as limited resources or inadequate search skills. The study also looks at the various sources used by arts and humanities teachers. The study illustrates an insightful information landscape in the academic ecosystem of Punjab University. The study of Richardson and Mahmood's (2012) eBook Readers: User Satisfaction and Usability Issues" contains no explicit discussion of the theoretical framework. The study discussed neither realism nor other suitable theoretical frameworks. Realism was not the appropriate theoretical framework for this study. The study focused on the practical features and user experience of eBook readers. The article examines popular eBook readers using data from ethnographic journaling research and surveys, including portability, multi-book storage, navigation, lending titles, and the debate between licensing and ownership. The research article by Mahmood (2016) presents a systematic review of the available empirical evidence on the Dunning-Kruger effect in the context of information literacy. The Dunning-Kruger effect is a recognition bias in which low-ability individuals tend to overestimate their abilities. The review analyzed 53 English language studies that compared people's self-reported and practically demonstrated information literacy skills. Key findings include that there is a lack of correlation between perceived and actual information literacy skills, and low performers often overestimate their skills in self-assessment. The article focuses on the psychological phenomenon of self-diagnostic accuracy rather than the artistic or philosophical concept of realism.

The findings of the study revealed that realism is less implemented in library and information sciences research. There is an opportunity to explore further research areas by utilizing realism to generate new insights and understanding of the field. The impact of social structures, power dynamics, and mechanisms on information can be studied by utilizing realism to shape information behavior.

Ontological Claims in Library and Information Science Research.

From the realist point of view, the information has an objective reality, in library and information science research ontology deals with the nature of information, systems, and the reality in which they exist (Hjørland, 2000). The ontological claims in library and information science research include affirmation about what exists in the field. For instance, the relationship between information and knowledge. The ontology in the field of library and information science imagines that information and knowledge have an existence that is independent of human perception and conception (Syamili & Rekha, 2021). A realist ontological claim affirms that information, information systems, knowledge, and mechanisms have their functions and properties nevertheless how they are perceived and used by the users. This is contradictory to constructive ontology, which claims that the information is socially constructed. Ontological realism in library and information science

research covers the ideas that affirm that information structures can be studied objectively, which has the potential for information systems evaluation (Mingers et al., 2013).

Epistemological Claim in Library and Information Science Research:

Epistemology deals with nature, scope, and theory of knowledge. In library and information science research epistemological claims deal with how someone comes to know things related to information, knowledge, systems, and users. It recognizes that knowledge can be derived from solid facts of reality. This approach recognizes that knowledge can be gained through research and observation of reality (Sol & Heng, 2022). Realist LIS researchers use epistemological methods to emphasize that they can discover the truth and that their understanding is based on scientific and objective research. Objective knowledge can correspond to a mind-independent reality which can be achieved by research and observation (Ma, 2012).

Methodological Implications of Realism in Library and Information Science:

Methodological Implications of Realism in Library and Information Science focus on empirical research, causal explanations, mixed-method research, and critical realism where data from the population can be gathered through surveys, experiments, and observations. Casual relationships can be uncovered between information phenomena, and to gain an in-depth understanding of phenomena mixed-method research is very important. Critical realism deals with the production of knowledge it recognizes the influence of social structures and power relationships (Wikgren, 2005).

Conclusion:

This study examined the application of realism in library and information science research. The top ten research articles of LIS research were selected to examine the application of realism as a theoretical framework, but the researcher found that even a single study has not employed realism. The application of realism in Library and information science research focuses on the belief that a mind-independent reality exists. As Hjorland (2004) argued that realism should be the theoretical foundation for library and information science research. The field is open to exploring further research areas by utilizing realism to generate new insights and understanding of the field. The impact of social structures, power dynamics, and mechanisms on information can be studied by utilizing realism to shape information behavior.

Recommendations:

Based on the findings of the study the researchers recommend that

i.   The LIS researchers must encourage the application of realism in LIS research to study the social structure and mechanisms shaping information behavior.
ii. To unveil the root cause of information-seeking behavior define and explore the generative mechanisms in LIS.
iii. Explore the role of realism in AI and digital libraries and address power dynamics and information inequities in digital spaces.

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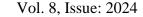
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