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Paradigmatical development of accounting: historical analysis

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Abstract

The research paper offers an advanced exploration of the paradigmatic evolution of accounting, integrating historical, theoretical, and institutional frameworks. Employing Thomas S. Kuhn's theory of scientific revolutions, it interrogates the trajectory of accounting paradigms, elucidating their emergence, contestation, and eventual transformation. The analysis critically engages with the contributions of preeminent scholars such as R.J. Chambers, R.R. Sterling, and R.V. Mattessich, positioning their work within the broader discourse of paradigm shifts in accounting theory. This investigation extends beyond theoretical boundaries, illuminating the dialectical relationship between socio-economic forces, institutional responses, and paradigm realignments driven by crises, technological disruptions, and regulatory reforms. The research advances the application of Kuhn's framework within accounting discourse, advocating for its adaptation to encapsulate the multifaceted socio-institutional dimensions of accounting science. It underscores the inherent pluralism of accounting paradigms and their responsiveness to evolving societal and economic conditions. The research confronts the epistemological and methodological limitations of Kuhn's model in accounting, calling for a nuanced refinement that aligns with the discipline's institutional complexities. The findings provide a significant contribution to scholarly discourse, fostering a deeper understanding of the evolution of accounting paradigms and their implications for theoretical and applied practice.

Keywords: accounting paradigms; accounting theory; institutional theory; accounting history; methodology of acccountnig reseach.

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1. Introduction

The change in the functioning of economic systems during the formal and civilisational transformation of the economy leave a significant imprint on the development of the national accounting system. Its adequate bringing to the domestic conditions and peculiarities of the functioning of the international capital market is one of the primary assignments for modern researchers-accountants. The set assignment can be fulfilled by applying various tools and scientific research methods, which determines the level of development of the problem and the real possibilities of accounting science. One of such methods is the paradigm of analysing scientific knowledge dynamics, which considers knowledge accumulation as a revolutionary (non-cumulative) process.

Kuhn's T.S. (1970) formulation of the concept of scientific revolutions and its active dissemination in the scientific sphere to explain the peculiarities of the development of natural sciences has led to the fact that since the 1960s, to develop meta-theoretical principles of accounting, they began to apply the paradigm concept of scientific knowledge dynamics. It was exploited by the representatives of the «Golden Age» of accounting progress in the United States – R.V. Mattessich, R.R. Sterling and R.J. Chambers, which can be explained by their desire to find additional arguments in the fight against the positive theory of accounting, as this concept was one of the post-positivist ones, which at that time were actively developed by researchers in philosophy of science (K.Popper, L.Laudan, I.Lakatos, S.Toulmin, P.Feyerabend etc.).

The tendency to use the paradigm concept in accounting research has become much more relevant since the end of the twentieth century. It persists to this day due to the growing number of significant changes in the functioning of the economic system. Many scientists treated the emergence of revolutionary changes in the activities of enterprises in the context of globalisation as the need to apply the concept of scientific revolutions to analyse the dynamics of scientific accounting knowledge. However, in our opinion, the application of the paradigm concept in accounting is not always aimed at solving specific significant problems or at finding revolutionary changes in accounting science, but rather dictated by the fashion for the use of the concept of «accounting paradigm» and the desire to do their «more scientific» and «philosophically sound» scientific research. The current situation implies the need for a detailed analysis of paradigm concept application to solve explicit (can be solved within existing theoretical concepts) and implicit (outside the existing methodological principles and attitudes) problems of accounting, taking into account the substantive characteristics of the idea of scientific revolutions proposed by Thomas S. Kuhn.

2. Literature Review

The use of the T.S. Kuhn's paradigmatic model of the development of science in accounting has a long tradition. This method for analyzing the historical development of accounting was used by both the founders of the normative theory of accounting (Chambers, 1966; Sterling, 1967; Ijiri, 1982; Butterworth et. al., 1982; Butterworth, Gibbins and King, 1982; Mattessich, 1995) and modern accounting researchers in educational publications on accounting theory (Kam, 1990; Szychta, 1996; Nowak, 1998; Glautier and Underdown, 1997; Gouws and Rehwinkel, 2004; Riahi-Belkaoui, 2004).

Today, a separate group of scientists is engaged in the analysis of existing accounting paradigms, comparing them, confirming or refuting the feasibility of their allocation in accordance with the T.S. Kuhn's paradigmatic concept (Wells, 1976; Cushing, 1989; Tomkins, 2001; Pasko, 2007; Yukhimenko-Nazaruk, 2017, Zhuk, 2018, Nazarova, 2023; Bila, 2024; Tunque-Lizana, and Quispe-Huaman, 2025).

In connection with the formation of a knowledge economy and the significant impact of digitalization, innovation and network technologies on the activities of enterprises, a number of researchers also emphasize the need to distinguish separate accounting paradigms that will allow us to identify the key differences of new information models that provide accounting reflection of the activities of enterprises in the context of such new changes (Elliott 1992; Lev, 2000; Håkansson and Lind, 2004; Shaikan, 2009; Shortridge and Smith, 2009; Lev and Gu, 2016; Spilnyk et al., 2022).

Despite the considerable attention paid to the issue of using T.S. Kuhn's paradigmatic concept in accounting, today there is no general classification that can be used by scientists to systematize accounting metatheoretical knowledge.

3. The identification of previously unresolved issues and the formulation of research hypotheses

Through a comprehensive historical, comparative, and institutional analysis, the research strives to identify the key paradigms that have shaped accounting theory, highlight their theoretical contributions, and determine their relevance for the contemporary development of accounting science.

4. Research methodology and methods

The research paper is characterized by an extensive historical analysis, which traces the evolution of accounting theories from the mid-20th century to the present time. Through this lens, the research identifies key phases of theoretical advancement, situating these within the broader context of Kuhn's model of scientific progress. Such a historical examination is instrumental in demonstrating how successive accounting paradigms have emerged in response to crises within the discipline, thereby marking distinct phases in the advancement of accounting thought. The research further integrates an extensive literature review, critically engaging with various classifications of accounting paradigms proposed by different scholars. This review serves as a foundational component of the study, enabling the identification of patterns and inconsistencies within existing theoretical

classifications and contributing to the discourse on the suitability of Kuhn's framework for analyzing developments in accounting science.

The theoretical foundation of the research is firmly anchored in Kuhn's concept, including those of scientific revolutions, paradigm shifts, and incommensurability between competing paradigms. The research paper draws on institutional theory to explore the socio-economic dimensions of accounting evolution, highlighting how accounting paradigms function not only as scientific constructs but also as institutional responses to societal changes.

5. Main results

The first to apply the paradigm concept of T.S. Kuhn in accounting was R.J. Chambers (1966). In work «Accounting, Valuation and Economic Behavior», he refers to the early work of T.S. Kuhn, Copernican Revolution: Planetary Astronomy in the Development of Western Thought (Chambers, 1966). Later, R.J. Chambers uses the final provisions of the theory of T.S. Kuhn, referring to the work The Structure of Scientific Revolutions (1962). In the article «Profit Measurement, Capital Maintenance and Service Potential: A Review Article» (Chambers, 1975), he mentions the current crisis in accounting. To describe it, the author uses the appropriate phase of science in the model of T.S. Kuhn. In particular, he writes that the book by G.MacDonald, «Measuring Profits: Alternatives to Historical Costs» (1974), is an interesting example of some features of the «crisis» period in the development of the ideas described by T.S. Kuhn (Chambers, 1966). He bases the argumentation of the hypothesis of a crisis in accounting on the presence of a significant number of methods of valuing assets and a significant variation in the concepts of income used.

Prof. R.R. Sterling was the first of the researchers-accountants to apply the paradigm concept at the theoretical level of accounting and use as a model the work Structure of Scientific Revolutions (1962). He used the provisions of T.S. Kuhn's theory in «Regulations on Basic Accounting Theory: A Review Paper» (1967), which discussed the controversial and revolutionary ASOBAT of the AAA Committee in terms of the worldview changes it uses to form new theoretical principles of accounting in the United States. The author wrote that the proposed consideration of accounting as an information measuring system is an example of changing the worldview of its representatives and is an example of a scientific revolution. It was successfully confirmed by changing attitude to understanding relevance in accounting (Sterling, 1967). However, this was a rather «vague» analogy because R. Sterling did not try in this or subsequent scientific works, where he used it, to reveal in more detail all the components of the concept of paradigm shifts and give examples of their existence in accounting.

The first to make such an attempt was M.C. Wells, who in the article «Revolution in Accounting Thought» (1976) used the components of paradigm theory and identified the stages of development of science according to T.S. Kuhn in accounting (Wells, 1976). As a result, in many subsequent studies, he is considered the first of the researchers who used the paradigm method to periodise the accumulation of scientific accounting knowledge. The author considered the evolution of accounting as a sequence of periods of cumulative development, interrupted by non-cumulative leaps – scientific revolutions. R.J. Chambers believed that accounting science was in a crisis phase due to estimation based on historical costs, which he attributed to elements of the old paradigm. He associated the development of this paradigm with the works of S.Gilman, T.Sanders and A.Littleton. He attributed the period from the 1940s to the 1960s to the period of normal science.

According to M.C. Wells (in the 1970s), accounting was in the third and fourth stages of its life cycle out of the following: 1) Acceptance of the paradigm; 2) Work within the modern paradigm with the creation of «normal science»; 3) Formation of dissatisfaction with the existing paradigm; 4) Search for a new paradigm. In particular, he notes that the analysis presented here shows that research in financial accounting is experiencing a revolution. Critics do not recognise the importance of research, which leads to the distinction between alternative ideas. These alternatives are candidates for a new disciplinary matrix (paradigm); they are the basis of competing schools of thought (Wells, 1976).

According to T.S Kuhn, he considers the period of normative theorising and research in accounting a crisis, which may be followed by a change in normal science (paradigm shift). In particular, M.C. Wells refers to the high-profile debates that have arisen among researchers-accountants about price changes, which are examples of anomalies that will ultimately lead to a change in the existing set of rules (Wells, 1976). The primary purpose of the analysis of M.C. Wells was to protect the a priori research in accounting from growing criticism, which was a necessary step in changing the existing paradigm. The theory of T.S. Kuhn predicts that the paradigm may change under the criticism of competing paradigms.

Having considered the existing problems in accounting, to eliminate them, he proposes to change the traditional way of «accounting thinking», for which he identifies five schools of thought: 1) Accounting, adjusted for price levels (or accounting for current purchasing power); 2) Accounting for replacement cost; 3) Accounting for residual value; 4) Accounting for continuous current (or net realisable value); 5) Accounting for current value (Wells, 1976). The emergence of accounting schools of thought in the 1950s and 1960s and their constant development to reflect the economic reality more accurately indicates the gradual exit of accounting from the crisis phase. Based on the identification of modern accounting problems, in particular, which appeared with the manifestations of inflationary processes in accounting, M.C. Wells concluded that it was necessary to transit to a new paradigm (disciplinary matrix).

Like M.C. Wells, features of application of T.S. Kuhn's theory in accounting were considered by D.Flamholtz in «The Structure of Scientific Revolutions and its Implications for the Development of Accounting Policy» (1976). She defined the period up to the 1930s as the pre-paradigm stage of the science of accounting, and the 1930s, are defined as the period of development of the accounting paradigm. Normal science, in her opinion, is the long-term development and promulgation of accounting rules after the 1930s by such professional organisations as CAP, APB and FASB. The existence of a crisis in accounting, according to D.Flamholtz (1979), became apparent in the 1970s, when the accepted accounting paradigm could not

adequately reflect the economic reality in various areas: the inability to sufficiently reflect price changes; the increasing complexity of financial operations; the need for accounting for human capital. A new paradigm that will solve existing problems can only emerge due to effective interaction between the government and the representatives of the accounting profession. But the author does not offer a possible model of such a paradigm.

Butterworth J.E., Gibbins M., and King R.D., in work «The Structure of Accounting Theory: Some Basic Conceptual and Methodological Principles» (1982), proposed to distinguish six interrelated paradigms in the science of accounting: 1) Valuation 1, which is based on the concept of actual value and current costs; 2) Valuation 2, which is related to the theory of assessment and risk; 3) Valuation 3, relating to theories of financial markets; 4) Stewardship I, which applies the concept of historical cost and price of income; 5) Stewardship II, related to agency theory; 6) Stewardship III, relating to the theory of asymmetric information. Highlighted by J.E. Butterworth, M.Gibbins and R.D. King, paradigms played a crucial role in the development of accounting. They became the prototype of many paradigm classifications, which scientists later gave.

Butterworth J.E. , together with Falk H., notes that over the past 60 years, the accounting literature reflects the disputes between the representatives of the «valuation paradigm» and «stewardship paradigm» (Cushing, 1989).

Butterworth J.E. and Falk H. (1986) suggest that recent research on capital market accounting has its origins in the valuation paradigm. In contrast, the study at the intersection of accounting and agency theories has similarities with the stewardship paradigm. Researchers conclude that accounting is in a state of crisis – a debate over the choice of paradigm. They propose to resolve the conflict between the two existing paradigms by developing a «contracting paradigm», which assumes that the primary purpose of accounting reports is to provide an efficient basis for concluding financial contracts between the management of an enterprise, its owners and creditors (Cushing, 1989).

Prof. M.Glautier, in his work «In search of paradigms of accounting» (1983), considered the application of the concept of T.S. Kuhn in accounting based on the analysis of its historical development. He tried to formulate general observations of the historical process through appropriate changes in the structure of society, which can be revolutionary or catastrophic, evolutionary or lead to the gradual emergence of a new paradigm (tab. 1).

Table 1
Accounting paradigms, according to M.Glautier (1997)

№	Paradigm	Characteristic features of the paradigm
1	Ancient world	Creating a prerequisite for the emergence of money
2	Ancient Rome	The emergence of problems related to the structure, control over accounting, the rudiments of capitalism
3	Middle Ages	The transition period reflected the significant social tensions associated with the paradigm shift, primarily due to the conflicts between religion and capitalism, church and state, and the development of restrictive accounting in the form of double-entry accountancy
4	Western European world of the postwar years	1) Continuation of the trend of centralisation that began with the Renaissance; 2) Belief that the central political power acts directly to provide a structure within which all existing problems will be solved; 3) The growth of knowledge accumulated in a geometric progression leads to problems of control and ever-increasing complexity; 4) The objectives of the central political power completely unlimited economic sphere, and concerning social and cultural areas that concern not only the economic dimension; 5) External and internal threats to the integrity of Western European civilisation are the most significant, and there is uncertainty about the application of ways to eliminate them

Prof. B.E. Cushing (1989), analysing the author's proposals (tab. 1), notes that the existing approach to the allocation of paradigms in accounting has certain limitations because M.Glautier does not try to describe the development of accounting entirely using the terminology of T.S. Kuhn, and makes only one reference to his work.

In his work «A Kuhnian Interpretation of the Historical Evolution of Accounting» (1989), Prof. B.E. Cushing considers the possibility of applying T.S. Kuhn's concept of scientific knowledge dynamics regarding accounting. First of all, he proposes to define the concept of «accounting» because according to the theory of T.S. Kuhn, scientific revolutions «result in fundamental shifts in the nature of a discipline, so it is necessary to use a very broad definition that will not inhibit thinking about the possible future evolution of accounting» (Cushing, 1989). Therefore, the author considers accounting as a matter «to deal with making sense out of the economic performance of individuals or groups who are responsible unitisation of economic resources, for the purpose of exerting control over those utilisation activities» (Cushing, 1989). Next, he analyses the possibility of applying the concept of T.S. Kuhn not only to sciences but also to other intellectual disciplines, which can undoubtedly include accounting. He gives examples of using the structure of the scientific revolutions of T.S. Kuhn in sociology, political science, economics, psychology, history, theology, art and literature, education. As a result, B.E. Cushing concludes that since the ideas of T.S. Kuhn can be used by researchers in such a variety of disciplines, then without a doubt, it is advisable to use them in accounting.

To identify the accounting paradigm, B.E. Cushing considers the subject matter of accounting at its elementary level, applying the criteria for determining the paradigm. The accounting paradigm should be shared, agreed with all accounting community members, and not at the pre-paradigm stage of its development. He defines the accounting paradigm as «a set of symbolic generalisations, shared commitments, shared values, and exemplars associated with the double-entry bookkeeping model» (Cushing, 1989). Accounting was in the «normal science» stage during the past four centuries, as the double-entry

bookkeeping model has shown considerable stability. With the advent of each new problem, the double-entry paradigm provided the means to solve it (Riahi-Belkaoui, 2004). Thus, the main research result of B.E. Cushing was the selection and justification of the dual system of accounting as its paradigm, which can be considered a disciplinary matrix that characterises the set of beliefs of scientists in accounting concerning the theoretical and methodological principles used.

Professor R.V. Mattessich's work is also dedicated to applying the model of science development of T.S. Kuhn. In the preface to the reprint of his fundamental work «Accounting and Analytical Methods», he first talks about applying the philosophy of science in accounting, in particular, represented in the works by T.S. Kuhn, J.Sneed, W.Stegmüller. The final design of T.S.Kuhn's science model in accounting can be seen in his work «Critique of Accounting: Checking the Fundamentals and Regulatory Structure of Applied Science» (1995). In this work, some chapters are dedicated to the critical analysis of accounting compared to the development of the post-Kuhnian philosophy of science during the 1970s–1980s and applying the concept of paradigms by T.S. Kuhn in accounting research. Professor R.V. Mattessich believes that no paradigm prevails over others in accounting, and the paradigm defined by M.C. Wells as an old one still plays a significant role in the development of accounting.

Having based his research on the works of J.E. Butterworth, prof. R.V. Mattessich suggests his own classification of accounting paradigms (fig. 1).

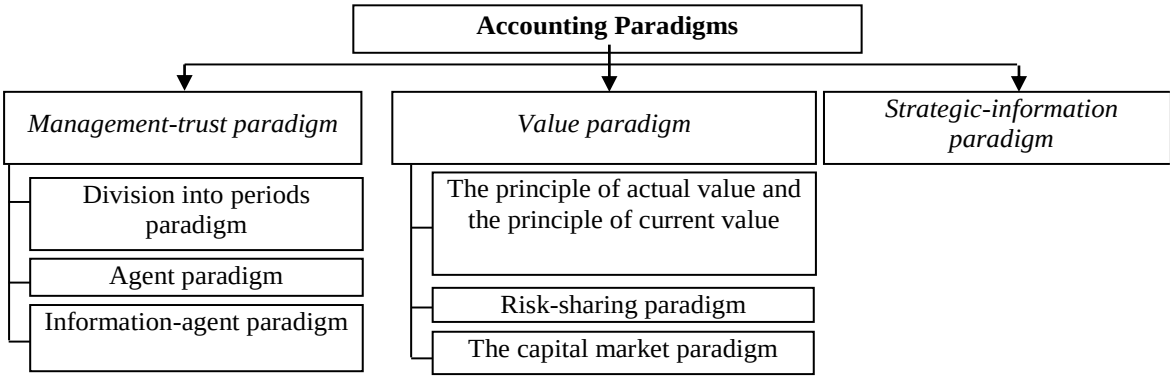

Fig. 1. Accounting Paradigms According to R.V. Mattessic (1995)

Prof. R.V. Mattessich (1995) points out three paradigms of accounting: management-trust, value paradigm and strategic-information paradigm. The main task of accounting for the management-trust paradigm is to control the trusted property – a trust function. As to the value paradigm – ensuring decision-making based on valuation at present value, current value and forecast market value; concerning the strategic information paradigm – meeting the various information needs of a significant number of users, which involves creating a theory that would ensure orderliness of accounting systems its different information purposes.

Analysing the work of R.V. Mattessich, the Polish researcher, Prof. A.Szychta, concluded that the methodology of science by T.S. Kuhn in accounting could be considered from two sides: 1) In the narrow sense – similar to the views of R.V. Mattessich on the formulation of accounting theory, and, as a consequence, on the method of authorising the science of accounting; 2) In a broad sense, like the theory of triple entry in accounting by Y.Ijiri, which expanded the accounting system based on double classification, adding to it a third dimension – analytical-causal (Szychta, 1996).

Prof. W.A. Novak (1998) identifies the following accounting paradigms: the anthropocentric inductive paradigm; the real income deductive paradigm; the paradigm of decision-making usefulness in the framework of the suitability of accounting information to this model of decision-making; the paradigm decision-making usefulness in the framework of the aggregate market; the paradigm of decision-making usefulness in the framework of the individual user of information; the paradigm of economic nature of information (Novak, 1998).

South African researchers D.G. Gouws and A.Rehwinkel, in their work «Financial Accounting and Reporting: Sustaining Relevance in the Present Time Paradigm» (2004), proposed the allocation of four sub-paradigms of accounting. The selection of paradigms was based on the transdisciplinary research taken in the social sciences, physics and philosophy (fig. 2).

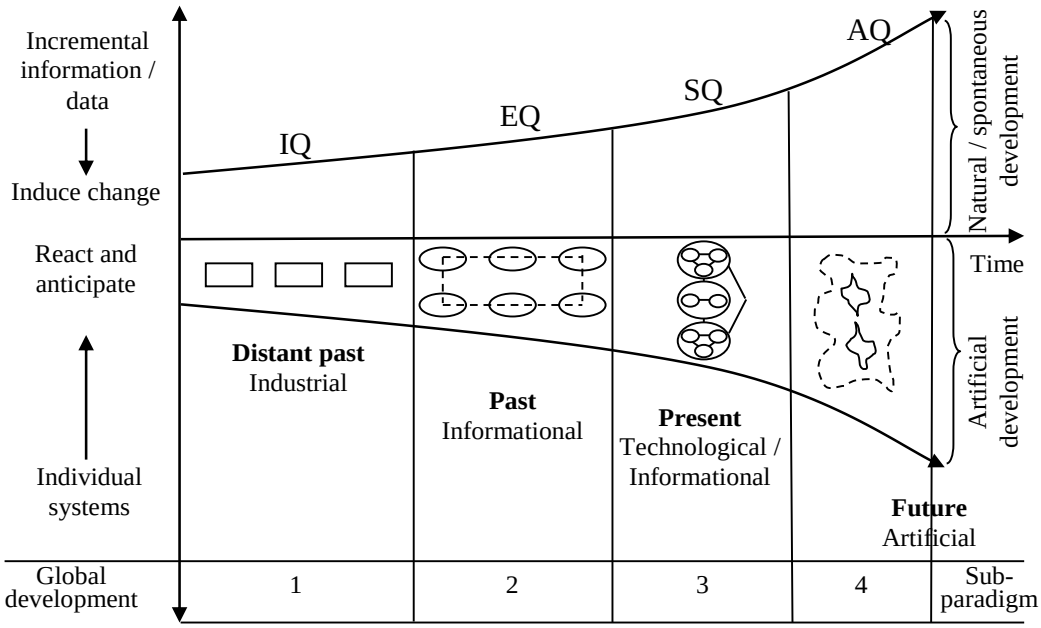

Fig. 2. A Transdisciplinary transcendence paradigm in relation to the arrow of time and information capacity, according to D.G. Gouws and A.Rehwinkel (2004)

In fig. 2, time intervals are displayed on the x-axis, and the information is on the y-axis. They move in opposite directions – because as information grows, time intervals decrease because more information can be adjusted faster. As noted by D.G. Gouws and A.Rehwinkel (2004), it is this phenomenon that causes unforeseen changes. For example, more changes have occurred in the last 50 years than in the entire Stone age.

Considering the features of accounting in the context of the selected paradigms allows determining the prospects for developing the accounting system based on the revision of the concept of time. The existing accounting system considers the facts of the past events, creating a perception of reality through a set of observations, reporting on those events based on which we can analyse the results of the enterprise. In current conditions, accounting is already partially inadequate to some requirements of accounting information users (as convincingly emphasised by B.Lev and F.Gu (2016) and will be completely unable to meet the needs of users shortly in the absence of practical steps to improve it following the requirements of stakeholders of the accounting system.

In recent years, applying the concepts of information and post-industrial society to the economic aspects of global problems, the active formation of the knowledge-based economy, researchers emphasise the need for the radical transformation of the accounting system. To ensure compliance of the accounting system with the growing needs of stakeholders in the new economic environment, scientists propose to identify a new accounting paradigm that would describe the existing changes and ensure compliance of accounting theory with the practical needs.

The first who paid attention to the need to identify a new paradigm of accounting in the context of the transition of civilisation was Prof. R.K. Elliott (1992), who wrote that the development of information technology had created a wave that "washed away the shoreline" of accounting. As a result, the industry collapsed in the 1970s, and the service sector collapsed in the 1980s. So, in the 1990s, in his opinion, accounting should have failed. Following the model, the reporting standards must be supplemented with unique information about capital, which is not reflected in the financial statements, both within a particular industry and individual information about each company. Another evidence of such a collapse was the emergence of systems and methodologies that provide non-financial information for management decisions. The consequence of such proposals currently is the active implementation and gradual international standardisation of the integrated reporting (King IV Report on Corporate Governance for South Africa, International <IR> Framework, Directive 2013/34/EU, Directive 2014/95/EU, etc.), which provides for the need for companies to disclose information of a financial and non-financial nature.

To highlight the paradigms of accounting, R.K. Elliott (1992) applied the theory of «three waves» of E. Toffler, as a result of which he distinguishes the accounting paradigm of the first wave (agricultural), the second (industrial) and the third (information) wave. The differences between the paradigms are the technological gaps and methods of accounting (tab. 2).

Table 2
Changes in technology and accounting in each of the waves, according to R.K. Elliott (1992)

Technology	*1st Wave*	*2nd Wave*	*3rd Wave*
Physical	Labor	Machinery	Semi-conductors
Information	Writing	Printing	Computer
Accounting	Single-entry	Double-entry	Triple-entry

Professor R.K. Elliott (1992) hypothesised that in the third-wave paradigm, there would appear the demand for a new accounting technology that had not yet emerged, a triple-entry accounting system developed by Y.Ijiri (1982). The author, though, is quite sceptical about the possibility of using it to meet the accounting needs of the third wave. The system of Y.Ijiri (1982) was built to account for industrial resources and liabilities reflected in modern financial statements and not for specific intellectual assets of post-industrial firms.

Prof. B.Lev, in his work «New Accounting for the New Economy» (2000), notes that the traditional model of accounting, focused on tangible (physical) assets and legally sound transactions, abstracted from many events that affect the change in value, was unable to interact with the new economic environment and does not provide the essential needs of managers and investors. As the starting point for forming a new accounting paradigm, B.Lev (2000) defines understanding an enterprise's business model, focused on knowledge, operating in a new economy. The development of such a model necessitated forming a new paradigm of accounting (fig. 3).

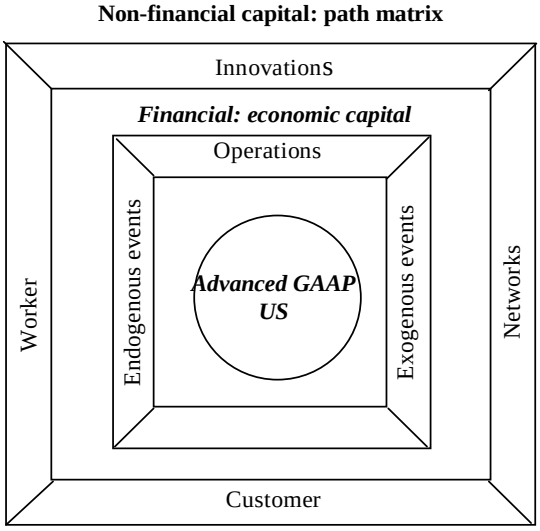

Fig. 3. A new paradigm of accounting according to B.Lev (2000)

In the formed paradigm of accounting, B.Lev (2000) identifies three main structural blocks: 1) Advanced GAAP US; 2) Financial and economic capital – a dual system based on the economic definition of the asset; 3) Non-financial capital – a matrix of the path between innovation opportunities and their consequences, an information system that ensures the establishment of the relationship between resources and results. The proposed information in the block of path matrices focuses on four main properties of innovations: development and commercialisation of products/services, human resources, customers, network connections. The three orbital systems are connected through control links into a coherent information structure. The new paradigm proposed by B.Lev (2000) expands the subject of accounting, including non-operational and non-financial areas. It ensures accounting compliance with rapid changes in the global economic environment by including the proposed system of information elements such as economic added value, a system of balanced indicators to eliminate managers' claims about the adequacy of the existing accounting system in a post-industrial economy.

Shortridge R.T. and Smith P.A. (2009), stating that today we live at the height of the revolution since Luca Pacioli described the double-entry accounting system, justify the need to move from an industrial to an information accounting paradigm. To do this, the authors use the paradigm theory of T.S. Kuhn, noting that the principles on which the financial accounting system is built are undergoing revolutionary changes (fig. 4).

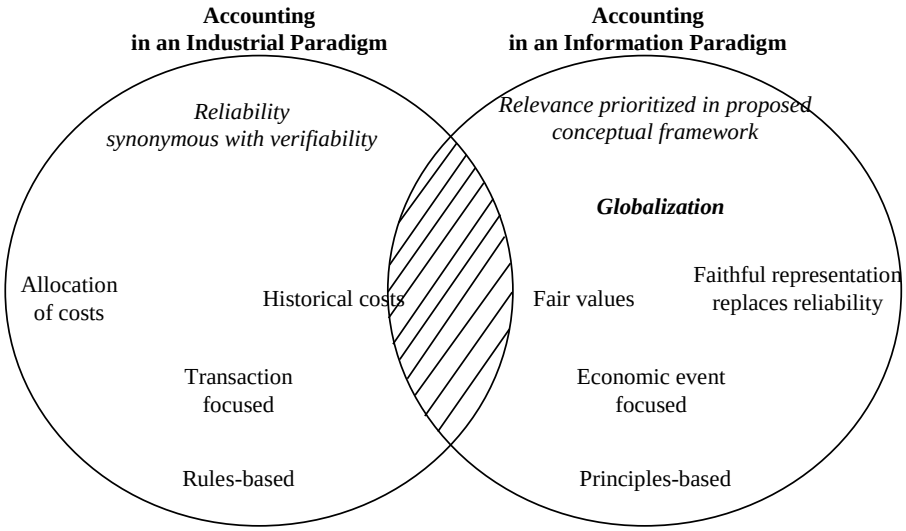

Fig. 4. A paradigm shift in financial accounting, according to R.T. Shortridge and P.A. Smith (2009)

Shortridge R.T. and Smith P.A. (2009) state the transition to the information accounting paradigm (fig. 4) due to the transition from industrial to the information economy, increasing globalisation trends and improving access to data and information processing capabilities. The main reason for the change was the anomalies of financial reporting, characterised by inconsistency with the needs of investors as its primary users. The authors consider the most significant illustration of such a transition to be the radical changes in the conceptual framework of the FASB financial statements, which took place in 2010 due to its convergence with the conceptual framework of the IASB. The main elements of the information accounting paradigm that distinguish it from the previous paradigm are the following: the transition from historical to fair valuation in accounting; changing the function of financial reporting from the redistribution of resources (reliability of calculations) to a fair presentation (more relevant); reflection in the accounting system not of operations, but critical economic events; assigning a more significant role to the professional judgment of the accountant.

The intersection of accounting and network coordination has become a focal point in contemporary research, reflecting the complexities of modern business relationships that extend beyond traditional hierarchical or market-based coordination forms (Håkansson and Lind, 2004). As networks emerge as a prominent organizational form, particularly in industries characterized by rapid technological change and inter-firm dependencies, accounting systems are tasked with supporting multi-dimensional coordination processes.

Accounting plays a critical role in managing relationships that blend hierarchical, market, and cooperative forms of coordination (Tomkins, 2001). In the case of Ericsson and Telia Mobile, Håkansson and Lind (2004) illustrate how accounting is embedded within an intricate network structure, encompassing multiple sub-units and diverse inter-organizational interfaces. Accounting methods that were traditionally developed for hierarchical structures are employed to manage network relationships, albeit with necessary adaptations to accommodate the fluid boundaries and multi-directional interactions inherent in networks.

The study by Håkansson and Lind (2004) underscores how accounting information fosters coordination by enabling shared understanding between network partners. Within the cooperative dimension of the Ericsson–Telia relationship, accounting is used not only for performance measurement but also for aligning mutual goals and resolving conflicts. This reflects the shift from using accounting solely as a control mechanism towards employing it as a facilitator of inter-organizational dialogue and joint problem-solving (Seal et al., 1999). The transition from hierarchical to network-based coordination introduces challenges for conventional accounting practices. Traditional accounting methods, which assume clearly defined organizational boundaries, struggle to capture the interdependencies and overlapping accountabilities that characterize networks (Van der Meer-Kooistra & Vosselman, 2000). Håkansson and Lind (2004) observe that while financial outcomes remain important, non-financial metrics and qualitative assessments become central in evaluating the success of network relationships.

The case study further highlights the coexistence of market-like competition and collaborative interactions within the network. The rivalry between different Key Account Management units within Ericsson, each representing distinct customer needs, creates a form of internal market coordination (Håkansson & Lind, 2004). Simultaneously, the collaborative projects between Ericsson and Telia Mobile exemplify the cooperative dimension of network coordination, where mutual adaptations and shared learning processes are critical for achieving joint objectives (Tomkins, 2001).

The findings from Håkansson and Lind (2004) reinforce the notion that network coordination requires a hybrid accounting approach, integrating hierarchical controls, market-based performance measures, and relational accounting mechanisms. This aligns with Berry (1994), who emphasizes the role of clan control in fostering trust and collaboration within inter-firm networks. Consequently, accounting becomes a bridge that connects diverse coordination forms, supporting both competitive and cooperative dynamics within networks.

The main approaches to the selection of paradigms of accounting as science are shown in figure 5.

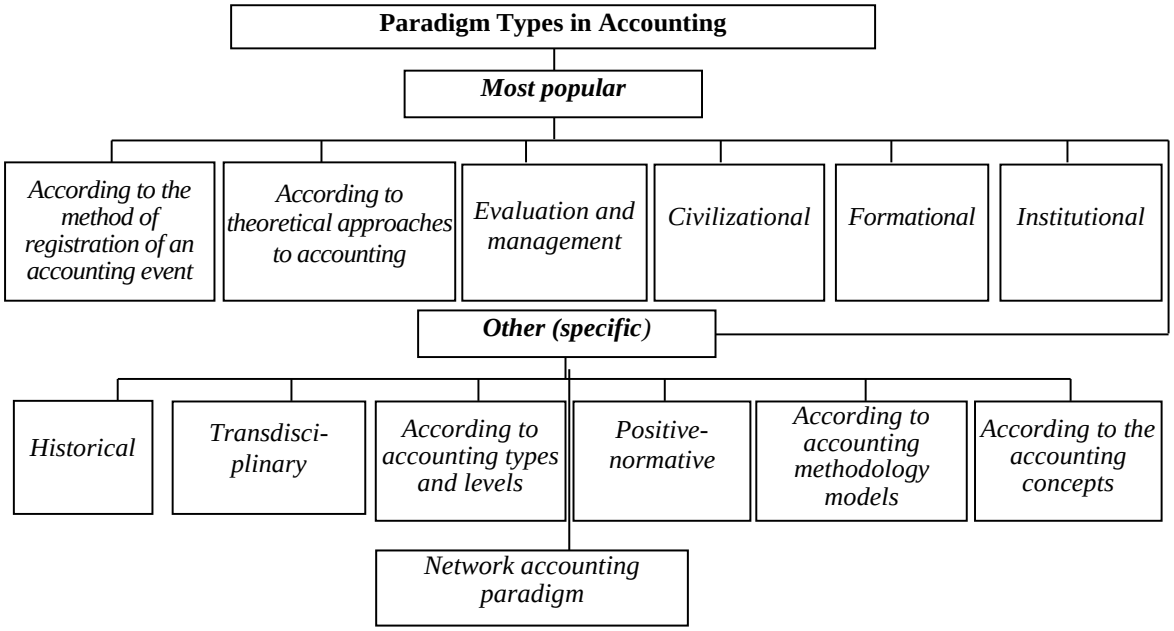

Fig. 5. Paradigm classifications in accounting

In addition to the paradigms of accounting as a science, researchers use the concept of paradigms of T.S. Kuhn (and in some cases only the name) for the consideration of accounting as a discipline, practical and scientific activities and their individual components, resulting in paradigms of accounting education, paradigms of research in accounting, paradigms of harmonisation of accounting, paradigms of accounting risk accounting, management accounting paradigms, strategic accounting paradigms, accounting paradigms, accounting valuation paradigms, etc. The existence of such diversity in the approaches is one of the reasons for the "blurring" of the concept of «accounting paradigm», which does not allow structuring of scientific knowledge in their dynamic development (as predicted by T.S. Kuhn), but a somewhat further chaotic system of scientific knowledge in the field of accounting, as such selected paradigms are pretty difficult to compare. In general, given the unsatisfactory qualitative level of selection of accounting paradigms by scientists, in other words, their inconsistency with the introductory provisions of the paradigmatic T.S. Kuhn's concept, the possibility of its application in accounting is considered rather doubtful.

The further development of accounting is inherently connected with the involvement of new methodological tools, which allows to better structure the subject of its research and improve the research process by scientists of painful accounting problems that need to be solved. One such tool is the institutional theory in its broadest sense, which can improve existing and develop new accounting and information models.

As a result of an in-depth study of the work of accounting institutionalism representatives, I.A. Yukhymenko-Nazaruk (2017) highlighted the general institutional paradigm of accounting, which consists of an institutional and neo-institutional block, and should act as a new common source of the worldview of scientists in the field of accounting, which is based on institutionalism in the broadest sense. According to the author, the formation of such a paradigm will expand existing research in accounting by more actively involving neo-institutional concepts that reveal the internal features of the functioning of institutions, and in general, will improve the theoretical and methodological foundations of accounting.

In Ukraine, the development of the institutional theory of accounting as a separate area of research is due to the efforts of Acad. V.M. Zhuk (2018), who made a significant contribution to the popularisation of accounting institutionalism, formed a scientific school whose representatives consider institutional analysis the primary scientific research method. Using the provisions of the paradigmatic concept of T.S. Kuhn, the author singles out the institutional paradigm of accounting, the main reasons for which are the need to expand the information support of different social groups outside the business entities and the need to consider accounting as an institution that reduces the risks of uncertainty in the socio-economic environment by forming a specific information field (Zhuk, 2018). The essence of the institutional paradigm of accounting in the words of V.M. Zhuk is that it aims to increase the mission of accounting from a management function to an essential socio-economic institution through the use of new objects – components of this institute, involvement in the accounting methodology of «accounting engineering» and «accounting imperialism», which leads to a new institutional theory of accounting (Zhuk, 2018). The allocation of the institutional paradigm aims at the institutional «armament» of accounting, ensuring its understanding as a socio-economic institution that plays an essential role in society not only as a means of informing decision-makers but also as a social and institutional internship, policy tool and social ideology that scientists can use to overcome socio-political and economic crises.

The existence of a significant number of different paradigms of accounting as a science should not be considered as evidence of multi-paradigm accounting, as noted by A.Riahi-Belkaoui (2004), V.Kam (1990) and R.V. Mattesich (1995); instead, it is the evidence of the inability of any of the paradigms to explain the causes and the process of changing the fundamental and auxiliary elements of accounting. It is the main reason that stands in the way of applying the methodology of scientific change according to the model of T.S. Kuhn to analyse the dynamics of scientific accounting knowledge.

The widespread use of a paradigm approach in accounting has led to the fact that today, to ensure greater scientificity of their publications, researchers are beginning to call any changes in accounting the paradigms. O.V. Pasko names the modern paradigm of accounting in Ukraine as neoclassical – after introducing the national NAS(S), and before that, in his opinion, the classical paradigm prevailed (Pasko, 2007). A.V. Shaikan (2009) names the paradigm of accounting (a set of universally recognised scientific provisions by the world scientific community) a double-entry.

Researchers using the concept of paradigm in accounting can be grouped into two groups: 1) Representatives of the first group use in their research the concept of «accounting paradigm» without reference to its substantive understanding, i.e. without indicating the source of its origin or authorship of the concept. Usually, such studies do not take into account existing developments in this field, and they develop their own «unique» paradigm; 2) The second group of researchers notes that they use the paradigmatic method of T.S. Kuhn; however, in most cases, they do not fully adhere to the logic and principles laid down by the author in understanding this method of analysing the dynamics of scientific knowledge.

This situation does not ensure a single theoretical structure of accounting as science and leads to chaos in accounting theory creation. However, this does not mean that the paradigmatic method should not be used to structure and analyse the dynamics of scientific knowledge. As a result, there is a need to find ways out of a situation where, on the one hand, the use of the paradigm method is necessary, and on the other – there is significant abuse of this method, which leads to confusion and chaos of accounting science. In this case, the only way out is to use «Occam's Razor», according to which the reproduction of new terms and concepts in accounting should take place only when their introduction is beneficial for the development of science. The use of the paradigm method in accounting will bring such benefits only when the paradigm is understood as the metatheory of accounting. While applying the paradigm method in accounting, one should fully use the logic and principles of the T.S. Kuhn's model and understand the essence of metatheory.

6. Concluding remarks

In conclusion, this research highlights the vast diversity of approaches to defining and classifying accounting paradigms, emphasizing the complex and multifaceted nature of accounting as a scientific discipline, information system, and socio-economic institution. The research paper introduces a two-tier classification framework for accounting paradigms, offering a structured means to compare existing theoretical models and assess their capacity to drive innovation within accounting science.

A thorough historical analysis of the application of Kuhn's paradigmatic method in accounting reveals considerable discrepancies between many established classifications and Kuhn's principles of non-cumulativity and incommensurability. Such inconsistencies challenge the suitability of Kuhn's framework for comprehensively analyzing the evolution of accounting knowledge. Despite these limitations, the research acknowledges the value of Kuhn's theory in capturing the revolutionary shifts within accounting thought, while also advocating for its adaptation to better account for the socio-economic and institutional dimensions that shape the field.

This research ultimately underscores the necessity for a refined methodological approach – one that integrates Kuhn's insights with a broader perspective on accounting as an evolving and interdisciplinary science. By addressing the gaps between theoretical models and practical developments within the field, such an approach could significantly advance the conceptualization of accounting paradigms and contribute to a more coherent and dynamic understanding of the discipline's ongoing evolution.

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