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# A historical narrative of value theory in economics and appraisal

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## ABSTRACT

The concept of *value* has been central to economic thought for centuries; the idea of what makes something valuable shapes how we exchange, produce, invest, and measure well-being. Neoclassical traditions have dominated the contemporary economic framework, privileging financial value as the primary metric of worth. This emphasis on quantifiability, reinforced by positivist methodologies, has marginalised broader considerations of multiple values and incommensurability. Real estate valuation perfectly embodies and exemplifies these tensions. This disjuncture between theory and practice reflects a broader issue within economics: the persistence of an overly narrow understanding of value. In response to these challenges – ranging from sustainability commitments to shifting societal priorities – we turn to a historical narrative of value theories to examine how foundational assumptions about value shape economic thought, resource allocation, and societal priorities. Recent studies point to a growing dissatisfaction with existing valuation models along with a shifting value paradigm: one that increasingly recognises multiple forms of values, the limits of commensurability, and the influence of social and ecological considerations on the practice of appraisal.

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## 1. Introduction

Valuation practice has been habitually focused on financial and monetary values. However, two main trends push this practice beyond this mono-value focus. First, governmental regulations have gone beyond simply capturing real estate in terms of market value to transition to a sustainable economy. New rules and regulations, germinating out of the Sustainable Development Goals (SDGs) are asking for other means of accounting (Schoenmaker & Schramade, 2023). Second, ongoing societal transitions bear more considerations of *value* than what current financial expressions can carry or reflect, causing misrepresentation of harder-to-measure considerations. This causes a range of issues, issues that are generally kept at arms length by most economists, namely, multiple values, weak or (in)commensurability and lexicographic preferences, social justice, fairness, and heritage values (Spash, 2008). Real estate embodies these complexities in particular, as they serve not only as economic assets but also as social and cultural

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landmarks – all while imposing a significant ecological burden (UNEP, 2022–11). For example, while it may be more economically feasible to demolish an obsolete office building, converting it into residential units could help alleviate the local housing crisis and contribute to a more sustainable built environment when incorporating circularity measures. The failure of a mono-economic approach to *capture* these different values keeps markets limited to the actors that can act with an easy-to-measure value in their pocket. The dominant focus on market value has also led to a stagnation in research, with a decline in academic interest in exploring new approaches to real estate valuation; in addition, the disconnect between theory and practice has further hindered the progress of the field (Canonne & Macdonald, 2003). The increasing recognition of these issues signals a potential shift in appraisal theory, as the field grapples with the limitations of its existing foundations.

This pivot towards what can be measured (money and observable data) is driven by the dominant positivist and empiricist schools of thought, which dismissed anything ‘vague and ambiguous’ as unfit for rigorous study. As the field of land economics becomes more integrated with financial economics, due to increased computing and data processing capabilities (Vandell, 2007), approaches to value that could not be easily quantified were effectively disqualified from mainstream economic analysis (Klamer, 2003). The result is a valuation ecosystem that overlooks the complexities of value, particularly in contexts where monetary metrics alone fail to capture broader dimensions such as social, cultural, and ecological contributions.

The latest literature in this area can be split into evolving i) the ‘modern’ approach which generally contain limited reflection upon theory (d’Amato & Renigier-Bilozor, 2017; Glumac & Des Rosiers, 2018; Pollestad et al., 2024) and ii) the ‘theoretical and behaviorally inclined’ methodological analyses (Beracha & Skiba, 2014; Diaz & Hansz, 2002; Salzman & Zwinkels, 2017). There is a comprehensive coverage of the field of investment valuation (Baum et al., 2000), and the technical details of valuation (Johnson et al., 2000; Rees & Hayward, 2000). What remains lacking, however, is a robust theoretical foundation that can account for the two main societal trends mentioned above. Therefore, this paper seeks to re-appraise the theoretical foundations of value and the act of (real estate) valuation, tracing its historical shifts. We argue that contemporary challenges in valuation arise not solely from methodological limitations but from insufficient engagement with the underlying concept and theories of value. As Goethe famously once stated, *[One] who cannot draw on 3000 years of history is living merely from hand to mouth*.

The following section presents historical theories of value and accompanying valuation theories related to property. We draw out some key aspects of value and explore whether economists applying existing valuation methods are reinforcing neoclassical frameworks or inadvertently contributing empirical support for a new theory of value.

## 2. The value of value theory

The concept of value has been central to economic thought for centuries; the idea of what makes something valuable shapes how we exchange, produce, invest, and measure well-being (Sirmans & Worzala, 2012a). The history of value theory in economics is a long and winding adventure that has captivated economic historians for centuries. At its core,

value theory plays a fundamental role in structuring markets and social relations. Real estate valuation, in particular, has developed its own interpretations of value theory within the broader landscape of economic thought.

Beyond the well-documented limitations of mainstream economic theory (Pirgmaier, 2021), the practical implications of different value theories are profound as a tool of analysis. Understanding the theoretical foundations of economic paradigms not only reveals how economists came to their current perspectives but also highlights how these frameworks have evolved over time. Historically, value theory encompassed diverse perspectives, but over time, these were overshadowed by the dominance of monetised, market-driven frameworks. This shift is not merely incidental; it reflects a broader trend in twentieth-century economics. A historical perspective allows us to grasp the gradual maturation of value theory while also analysing its limitations. More importantly, it clarifies how past thinkers frame social, ecological, and commensurability problems and why they land on such different, sometimes clashing, solutions. A better understanding of value theory is key to arriving at informed decisions on how to act.

### **2.1. The role of property**

Real estate within the economy is important as a resource to the business and social community. However, it also plays a double role within the economy as a home for investment funds. The implied theoretical basis underpinning this is the traditional theory of *market economics*; the three factors that contribute to economic wealth are i) people, ii) money, and iii) land (H. C. Smith et al., 1973). Shaping methods of value capture are the three approaches to value determined by analysing comparable sales, replacement costs, or the present value of future income streams. The financialization of real estate through securitisation and derivatives has further entrenched the built environment in such theory.

However, this does not touch upon the unique position of real estate: heterogeneity, immobility, illiquidity, high transaction costs, and its nature as a long-term investment. Unlike capital markets, real estate is shaped by a range of factors that complicate its analysis and valuation, many of which have not been fully considered, as highlighted by Lorenz et al. (2017) and Sayce et al. (2009). The immobility of real estate further complicates market dynamics, as market participants, rather than the product itself, must move. Furthermore, property investment decisions are made under fundamental uncertainty about the future (Akerlof & Shiller, 2010) and are characterised by high informational search costs, limited data, heterogeneous properties, and relatively few transactions (Tidwell & Gallimore, 2014). The lack of market similarity, while advantageous to investors, complicates the appraisal process; the diversity and distinctiveness of real estate markets present opportunities for profit through strategic allocation. Yet, existing valuation methods, which are often uniform and standardised, struggle to accommodate the variability found across these different real estate markets (Graaskamp, 1992).

Another key issue is the use of a singular market value in valuation methodologies, which does not fully account for the multiple perspectives through which real estate is valued. These bases of value are crucial because they shape the methods, inputs, assumptions, and ultimately the opinion of value that an appraiser provides. For

instance, the market value needed to determine the liquidation value for a pension fund differs, significantly from the market value necessary for equitable tax distribution, or for comparing asset managers. These bases share common elements, such as an assumed transaction, date of transaction, and the involved parties. However, while these standards ensure a degree of uniformity in practice, they often focus solely on financial or market-based metrics. Moreover, these standards are not wholly developed with the unique attributes of real estate assets, mentioned above, in mind nor are they adaptable to broader societal changes. Appraisal often treats properties as static investments, despite the cyclical and dynamic nature of real estate markets, particularly in light of lessons from the 2008 Global Financial Crisis. In the UK, this sparked a debate on shifting away from purely market-based valuations towards 'long-term prudent' valuations as inspired by Germany's valuation practices, which emphasise long-term rental income and yields rather than short-term market fluctuations (Warren-Myers, 2012).

These complexities are compounded by the fact that real estate demand is derived, meaning that value is contingent on its potential utility (Wendt, 1956). Traditional valuation approaches often fail to incorporate institutional factors such as legal frameworks, zoning regulations, and broader socio-economic influences, despite their significant impact on property markets (Wendt, 1974). Reliance on mechanistic valuation processes has contributed to methodological shortcomings, such as the circular reasoning inherent in defining market value based on past prices, which obscures the identification of speculative bubbles. The cost-based approach, which separately assesses land and improvements, also overlooks the reality that buyers transact in whole properties, further mis-aligning valuation with real market behaviour (Lorenz & Lu"tzkendorf, 2011). These growing theoretical and practical limitations have fuelled increasing dissatisfaction. The consequences of such limitations contribute to resource misallocation, speculative bubbles, and financial crises, as seen in 2008.

## **2.2. Societal needs and regulatory changes**

The exclusion of sustainability and social considerations further exacerbates long-term economic and environmental instability. The rise of sustainability as a 'fourth factor' in valuation reflects broader societal changes. Since the Brundtland Report (Keeble, 1988), (strong) sustainability has been recognised as an interconnected framework encompassing economic, social, and environmental dimensions (Giddings et al., 2002). The growing prominence of the sustainability agenda may, at first glance, seem disconnected from the issue of property pricing. This may have been the case some years ago, but now both environmental concerns and social well-being are influencing the pricing of property assets and the operation of property markets. While the market increasingly reflects environmental considerations, as evident in studies of green premium prices associated with energy-efficient buildings (Chegut et al., 2011; Eichholtz et al., 2010; Fuerst et al., 2013; N. Miller et al., 2008; van Overbeek et al., 2024; Zhang et al., 2024), real estate valuation inherently continues to lag behind. Relying on historical data, it often takes considerable time for changes in sustainability preferences to be reflected in transaction prices. Even in mature markets, where such data exist, social and environmental factors

are not explicitly integrated into valuation methodology – risking a disconnect between practice and the demands of today’s sustainability-driven market.

There is also a rapidly emerging raft of social and environmental legislation, with valuers encouraged to improve their awareness of sustainable developments that may impact value, including technology, legislation, policy and fiscal measures. Sustainability remains central to the real estate industry (UNEP, 2022–11), with increasing commitments to nature-related corporate reporting through frameworks like the Taskforce for Nature-Related Financial Disclosures (TNFD). Additionally, the launch of the Taskforce on Inequality and Social-Related Financial Disclosures (TISFD) signals ongoing efforts to develop frameworks for reporting on social impacts, dependencies, risks, and opportunities.

### 3. Review of literature

Consistent with prior research, this study examines the historical development of specific research traditions, presenting an overview of a topic by tracing its evolution and how it has shaped the questions asked and methods used (Wong et al., 2013). In both academia and science for policy, there is a growing recognition of the need for interdisciplinary research. Philosophers like Laudan (1978), Kuhn (1997), and Lakatos (2014) debated how research evolves. Each posited a core theoretical foundation, also referred to as a super theory, upon which further research is built. Kuhn saw paradigms as non-coexistent, Lakatos allowed for varied ‘states of health’, and Laudan fully embraced multiple simultaneous traditions. Our narrative review adopts Kuhn’s concept to examine the evolution of value theory. It provides critical interpretations and diverse perspectives, helping readers gain up-to-date knowledge about a topic as well as the controversies surrounding it. By mapping complex research areas and exploring multiple issues, narrative reviews offer reinterpretation and highlight interconnections. This contrasts with systematic literature reviews, which are more suitable for addressing a single aspect or answering specific, focused questions, often using meta-analysis for statistical pooling of data (Saz-Gil et al., 2021). Narrative literature reviews are considered valuable for theory-building, as they are particularly effective for generating new research questions, identifying future research directions, and summarising the limitations of past work (Rousseau, 2020; Vachon et al., 2021). While systematic reviews are often seen as less biased, narrative reviews emphasise the importance of context, relevance, and the broader scope of understanding, offering a complementary form of scholarship (Dixon-Woods et al., 2005; Greenhalgh et al., 2018; Petticrew et al., 2013). By mapping the development of value theory across different historical and theoretical contexts, we aim to synthesise how these narratives have influenced current real estate valuation practices and propose methodological improvements to meet contemporary regulatory changes and societal re-orientations.

Canonne and Macdonald (2003) reviewed the extent to which over 100 major North American textbooks on property valuation, as well as many property valuation manuals, treaties and anthologies, cover the theory of value and its history. They found a glaring omission: the theory of value, along with its historical foundations, was systematically neglected. Their sobering conclusion reveals that economists in the twentieth century turned away from the analytical study of value to concentrate on the apparently more

tangible econometrical analysis of prices. One key reason for this shift was the positivist preference for ‘fact and logic’ over ‘vagueness and ambiguity’, which disqualified hard-to-measure approaches of value from neoclassical economics, altogether (Klamer, 2003). It sets the stage for a deeper understanding of value and the methods of deployment.

In our survey of the literature, we take into account the insights of philosophers and other writers, tracing the evolution of value theory, chronologically. Given the magnitude of the literature on value theory, this is not an exhaustive review; rather, it is intended for a comprehensive understanding of the gradual development and refinement of thought in this area; highlighting the underlying preferences and bias that colour our understanding of value and how this impacts upon real estate valuation theory, today.

## 4. Theories of value

Prior to accurately gauging *value*, we must first grasp the factors that underpin value. The better parts of the next several sections are devoted to the evolution of value theory and a summary of its timeline is provided in Figure 1. By extension, the development of property valuation theory is reviewed.

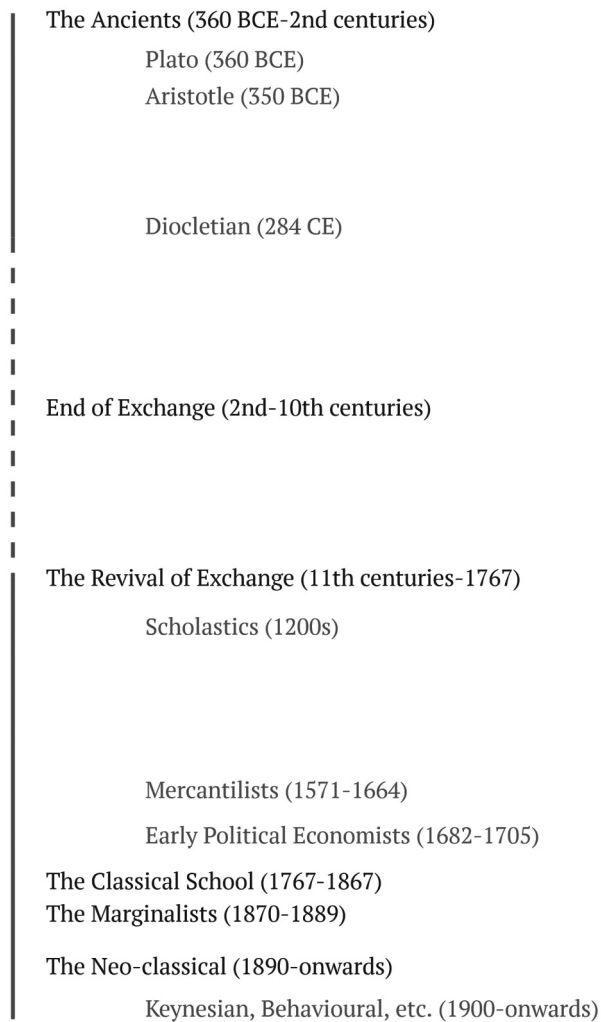
### 4.1. The ancients and the declining Roman Empire

Value theory in Western civilisations begins in ancient Greece, where discussions centred around the concept of a *just price*. Although lacking a formal theory, Greek thinkers emphasised the alignment of price with quality, laying the groundwork for later debates on normative versus positive perspectives in the appraisal function (Sewall & Pigou, 1901). Roman law further shaped notions of *value* by adopting a legalistic approach that emphasised *fairness* in economic transactions. However, value perceptions shifted during the *declining* Roman Empire, resulting in the mandatory establishment of *fair prices* from the State to signify an effort to ensure that the producing class could earn enough to sustain themselves through their selling prices (Kaser, 1964). Diocletian’s theory of value posited that prices were deemed *fair* only if sanctioned by the State: reflecting a bias and a value judgement that was susceptible to governmental influence, among other factors. It underscores the inherent subjectivity of determining the *just price* – tied to enforceable rights and power dynamics. Value embodied *value-in-use* (Davenport, 1908). Subsequently, the end of commercial life in the end of the Middle Ages marked a period of stagnation in value theory that lasted for centuries.

### 4.2. The revival of exchange

Next came more than two centuries of intellectual discourse from various schools of thought including the Scholasticism, Mercantilists, Early Political Economists, Physiocrats, and their critics. Many foundational concepts of current day valuation practice were derived directly from the writings of these diverse schools. The concept of *value-in-exchange* emerged during the transition from the barter system to market-centric systems (Kaulla & Hogg, 1940). During a period of booming foreign trade and colonisation, utility, along with labour, was recognised as a component of *value* and determined by the price or terms agreed upon by the parties involved in the exchange.





**Figure 1.** Chronology of the history of value theory.

Thomas Aquinas first recognised this as noted in his *Summa Theologica*, *the just price of things is not fixed with mathematical precision, but depends on a kind of estimate . . . value can, does and should increase in relation to the amount of labour which has been expended in the improvement of commodities*. The concept of *just price* introduced a normative and societal perspective to the notion of value which exists to this day (Featherston, 1975). This evolution, however, includes the contrasting views of Christianity and Stoicism on wealth accumulation and commercial contracts. Christianity viewed the accumulation of wealth as a sin, holding that contracts contrary to the principle of austerity could be voided by the Church. Stoicism considered it wise to obtain riches and advocated for non-interference in commercial contracts (Sewall & Pigou, 1901).

The Mercantilists, such as Thomas Mun and William Petty, influenced changes in economic policy for nations. Mun developed a theory of national wealth based on foreign

trade to accumulate treasures and labour, equating wealth with money. Petty, arguably the first economist in value theory, introduced the idea that *natural value* (determined by the land and labour required to produce it) may vary from its *market value* due to supply and demand relations. His theory of value merged with a surplus theory of rent, laid the groundwork for modern appraisal theory (Weimer, 1960).

Early Political Economists like Nicolas Barbon, an anti-Mercantilist and heretic at the time, argued that value depended on human wants rather than being intrinsic to the good, marking him an early predecessor of utility theory. John Locke, although primarily known for his philosophical work, asserted that intrinsic value is not natural but rather a consensus among people, while John Law's water and diamond paradox highlighted the role of demand in determining value.

The Physiocrats, reacting against the Mercantilists, argued that value stemmed from production rather than trade, advocating for a single tax on land-derived income. They developed a system based on the idea that natural laws and (Christian) Divine laws should work together. Richard Cantillon, a forerunner of the Physiocrats, linked value to the cost of production, laying down the foundations for the succeeding Classical School. Francois Quesnay distinguished separate notions about prices and the determination of value (inklings of *value-in-exchange* and *value-in-use*), noting that goods (mostly agricultural) only became wealth when they acquired exchange value through commerce (Sirmans & Worzala, 2012a).

#### 4.3. The labour theory of value & the classical school

At the turn of the nineteenth century, the rise of Classical value theory (aptly named the Labour and Subsistence theories) emerged as a counter-reaction against the Mercantilist emphasis on state intervention in trade and the accumulation of wealth. For the Classical theorists, scarcity was specific to land and natural resources, as they are not reproducible; they emphasised the limited nature of natural resources and carried additional implications. Manufactured capital was reproducible, so prices gravitate towards production costs (Martins, 2016). In contrast, the dominant approach today treats scarcity as universal, with prices determined by supply and demand, which then influence production costs (Walsh, 1926).

Notable figures such as Adam Smith, David Ricardo, Thomas Malthus, Samuel Bailey, and Karl Marx examined the peculiar determinants of price as shown by the costs of production. During this time, Ricardo's residual theory of land value was orthodoxy where rent was defined to be the excess payment on production costs. Ricardo also posited that no perfect measure of value exists in nature, and the variation of commodities is due to the differing amounts of labour required for their production. *Ricardian rent* is a type of economic rent created by variations in resource quality – directly bearing on appraisal procedures (Featherston, 1975). Malthus contributed to this theory, redefining rent as a price-determined surplus for landowners. These ideas were further developed by von Thunen, who translated land surplus patterns into spatial terms, thus initiating spatial economics and location theory, and laying the foundation for the notion of *highest-and-best use (HABU)* (Vandell, 2007).

To Smith, the Mercantilists were guilty of several fallacies as they conflated wealth with money and labour; *therefore, it appears evidently, is the only universal, as well as the*

*only accurate measure of value, or the only standard of which we can compare the values of different commodities at all times and at all places* (A. Smith, 1976). He echoed Quesnay's concepts of *value-in-exchange* and *value-in-use*, recognising that market *price* from sales might not reflect true market *value*. Rent to land in this context is considered by Smith to be a price-determining cost of production. He argued that market prices fluctuate with supply and demand but tend to gravitate towards a long-run *natural* level based on labour (Young, 1978). This idea parallels the contemporary appraisal concept that the cost approach is only reliable in near-equilibrium markets. However, it has been suggested that Smith believed that the labour theory of value would be useful only, in his words, *to that early and rude state of society where individuals were forced to labour for their own subsistence* (Sirmans & Worzala, 2012b). In his later years, Smith introduced (though in an ambiguous manner) a subjective theory of value (Mainwaring, 1984). Instead of being inherent in goods, *value* was tied to how commodities represent quantities of one thing in terms of another, relating to marginal utility as defined by modern microeconomics.

For Malthus, he identified three types of value: i) value-in-use, where the utility of an object was important; ii) nominal value, or price in exchange, found in the marketplace; and iii) intrinsic value, or price in exchange, which derived purchasing power from intrinsic causes.

Critics of Ricardo and Malthus, like Samuel Bailey (1825) in *A Critical Dissertation on the Nature, Measures, and Causes of Value*, challenged the orthodoxy by asserting that all value was relative, and the idea of absolute value had no meaning. Robert Torrens (1821) claimed that *natural value* was more than exchange value, emphasising that every value was merely relative, both critics, unknowingly, embodied the ideas of an early contributor to the utility theory school to come centuries later.

Crucially, classical political economy existed in a 'pre-disciplinary' era, where 'economy' was not abstracted from 'society', nor 'history' and 'polity', but rather undertook holistic explanation of how the economy works and evolves (Brown & Spencer, 2014). It did not adhere to the now-standard disciplinary divide between 'economics' and 'sociology'. As the economist Joseph Schumpeter once put it, many different 'visions' of the economy circulated and competed with each other. The next few eras fundamentally reshaped value theory along with the core discipline of economics.

#### **4.4. The theory of demand & the Marginalist school**

The Marginalists, or the Austrian School, rejected the Classical, Ricardian, notion that value is tied to the cost of production. Led by Jevons, Menger, and Walras in the 1870s, they argued that value is inherently subjective, determined by the utility a consumer derives from a good rather than the labour or resources used to produce it – shifting focus to the demand side (Mainwaring, 1984). The principle of marginal utility became central to the Marginalists, positing that the value of a good is not derived from its total usefulness but from the additional satisfaction gained from consuming one extra unit. This logic was extended to argue that value is not an inherent property of goods but rather a subjective assessment shaped by individual perception. As Boehm-Bawerk articulated, *value is the significance a good holds in contributing to an individual's well-being* (Alter, 1986).

By shifting the focus to demand-side dynamics, the Marginalists provided a critical departure from Classical Political Economy, which had emphasised objective, supply and production costs. The school also introduced mathematical formalism: developing value theory through mathematical models to better identify and test economic principles, influencing later valuation methodologies. While the subjectivity of value offered a valuable corrective to cost-based theories, the Marginalist approach had its limitations (Brown & Spencer, 2014): by largely neglecting supply and production factors, it presented an incomplete picture of market dynamics.

Beyond the *value* debate, the marginalist revolution enforced disciplinary divides. Sociology was subsequently positioned as the study of the *non-rational behaviour* – norms, customs, and traditions – while economics centred on *rational behavior* specifically in the context of the market. This shift also separated the *political* and *historical* from the *economic*, with politics defined as a distinct discipline and economic history relegated to the realm of history (Brown & Spencer, 2014).

#### 4.5. The neoclassical

From the 1890s to 1910s, this division was fortified due to the advancement of mathematical modelling methods and the additional emphasis on *rational behaviour* by figures like Edgeworth, Fisher, and Pareto. Subsequent developments, ranging from general equilibrium theory to game theory, further expanded the school, while behavioural economics emerged as a response to challenge key assumptions of the neoclassical school. And if Smith was to be lauded for the first *official* published work on economic theory, Alfred Marshall (1920) was the first economist to investigate *techniques* for pricing values, and a leading figure in the emergence of the neoclassical school. This synthesis remains the dominant school of thought today, with the merged supply-cost theory and demand-price theory forming the basis for modern-day value theory (Davenport, 1908).

Neoclassical economics, however, is an un-precise, umbrella term which to date, an agreed upon definition is absent (Massenberg, 2019). The ethical framework of neoclassical economics is grounded in *utilitarianism*, *anthropocentrism* and *instrumentalism* see, Randall (1988). Additionally, it is also founded upon methodological individualism, which assumes that all economic phenomena within a society or collective entity result from the aggregated decisions of individual economic agents, replacing the class-based perspective of classical political economy; see Elster (1982), Rosenberg (2001). It posits that crucial value elements – prices, wages, and profits – are determined by market mechanisms.

Marshall (1920) argued that when in equilibrium, this process facilitates optimal resource allocation across the real estate market as a whole. This also became the theoretical backbone for current appraisal techniques. His concept of quasi-rent also introduced a critical distinction: while land rent was a classical economic idea, quasi-rent extended the notion to include long-term improvements to land, acknowledging that real estate value is not static but evolves with investment and use.

Stemming from the marginalist revolution, neoclassical thought centred around the concepts of market efficiency and rational actors: the assumption that all market participants act logically to maximise utility and that prices reflect all available information (Massenberg et al., 2023). While this perspective allows for clear mathematical modelling

and predictive power, it also has significant limitations: the assumption of perfect information and rational decision-making does not fully capture the complexities of economic markets, where factors such as behavioural biases, regulatory constraints, and market imperfections frequently disrupt theoretical equilibrium; a shortcoming particularly evident in appraisal theory which will be discussed in the following section.

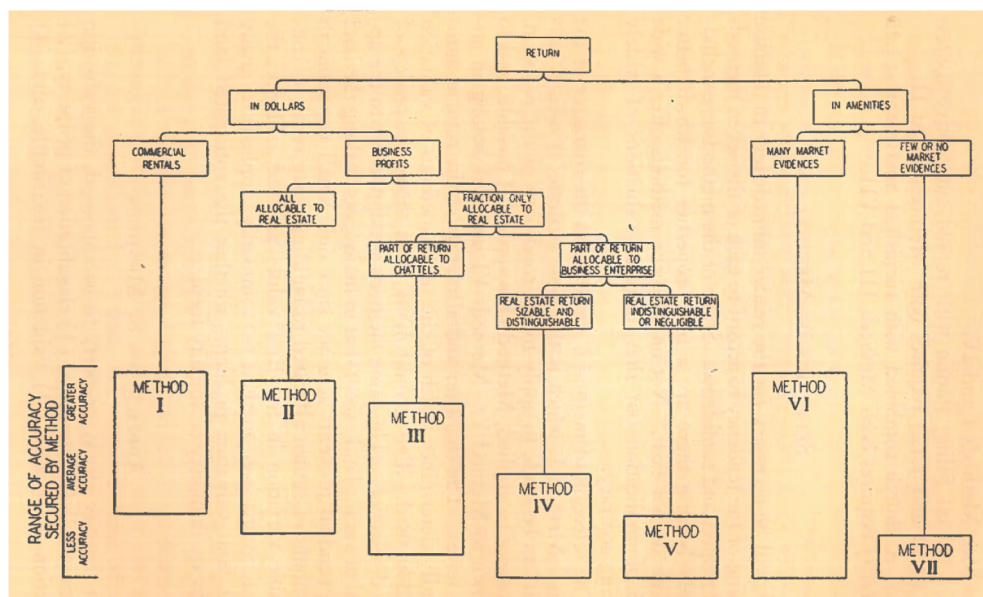
#### 4.6. (Property) appraisal theory

The evolution of valuation theory has been shaped by historical catalysts like tax reforms and the Great Depression. This development can be divided into three eras according to Boykin (1976): establishment, stagnation, and analytical extension. The first era not only saw the establishment of real estate appraisal theory and procedure but also marked a significant transition from value theory to valuation methodology. This transition was rooted in the neoclassical theory that linked costs, market prices, and capitalised income under *stable equilibrium* conditions, where the (three) approaches to market value, along with normal price and normal long-run cost theories, laid the foundation for appraisal principles that remain central today. Notable figures and their work will be discussed below.

##### 4.6.1. Establishment

Between 1906 and 1944, a period of growing financial markets and industrialisation, real estate valuation transitioned from loosely defined practices to a more structured discipline. Establishing the three fundamental approaches to value: comparative, income, and cost. The concept of *highest and best use* emerged during this period as well, shaping interpretations of *market value*. The foundations of valuation theory can be traced to a major theoretical breakthrough from Irving Fisher's (1923, 1906) expansion of the income capitalisation approach, which built upon Marshallian theory: the value of durable assets should reflect the present worth of expected future returns. Fisher's seminal work marked a shift in valuation towards future-oriented income expectations rather than reproduction cost. His ideas later influenced theorists like Babcock (1932a), who emphasised that real estate valuation should focus on future benefits and that the income approach was particularly suited for income-producing properties. However, he introduced seven *different* valuation methods, emphasising qualitative analysis of future amenities for non-income-generating properties shown in Figure 2. He distinguished value from market price, defining price as a fact and value as a concept. Bonbright (1937) critically examined the market value, distinguishing it from 'value to the owner' and challenged the legal reliance on the willing buyer/willing seller standard.

This period also saw the institutionalisation of valuation as an academic discourse, with the publication of early textbooks and manuals in the United States. The establishment of The Appraisal Journal in 1932 provided a platform for advancing theoretical discussions, and figures like Richard Ely and Babcock played key roles in formalising appraisal methodologies. One of the central debates of the time was the distinction between cost and value – it became increasingly clear that the amount spent on a property did not necessarily determine its value, especially if the investment did not translate into income-producing capacity (Featherston, 1975).



**Figure 2.** No single value, no single method - Babcock's the valuation of real estate was the first to unify appraisal techniques, emphasizing that the purpose of an appraisal shapes both the method and the value derived (Babcock, 1932b).

Another critical development was the recognition of real estate's sensitivity to economic cycles, challenging traditional neoclassical assumptions of market equilibrium. The Great Depression highlighted the volatility of property values, which prompted a re-assessment of valuation methodologies (Mainwaring, 1984). As a result, professional appraisal standards began to emerge, moving valuation from an informal practice to a more structured profession with standardised methodologies and formal education programmes.

Despite these advancements, valuation theory remained only loosely connected to broader economic value theory. Neoclassical economics focused on equilibrium pricing, whereas appraisal evolved as a practical discipline centred on observed market behaviour. While Fisher's income capitalisation approach provided *some* theoretical foundations by linking value to future income expectations, the cost and market comparison approaches remained largely empirical and operational, though its origins can be traced to the Classical school. This period highlighted a persistent tension between real estate appraisal as an applied discipline and appraisal theory as a normative framework, a gap that would continue to shape valuation debates throughout the twentieth century.

#### 4.6.2. Stagnation

Following a period of significant scholarly interest in appraisal methods, interest in value theory waned in the second half of the twentieth century. Wendt (1957) observed that there had been *no major contributions to appraisal theory since Babcock and Bonbright*. Canonne and Macdonald (2003) were even more critical, arguing that the field had ignored the theoretical foundations of economic value, turning appraisal into a trade



rather than a profession – with an emphasis on techniques over theory. Despite this theoretical stagnation, valuation methodology was refined, and the concept of *most probable market price* emerged as a key concept developed by Giuseppe Medici in 1953, shifting focus from the highest possible sale price to a more statistically driven estimate of likely market outcomes (Brooker, 1954). The traditional notion of *highest and best use* began to give way to the more practical *most probable use* by James Graaskamp (1991) and William Kinnard (1971), acknowledged that market constraints and investor behaviour often dictated outcomes that were not strictly optimal in an economic sense. Graaskamp especially criticised HABU as unrealistic, arguing that it overestimated the depth of analysis possible in appraisal (N. G. Miller & Markosyan, 2003). Simultaneously, appraisers placed a greater emphasis on market data collection and interpretation, moving beyond simple sale price records to incorporate factors such as urban growth patterns, property productivity, investment risk, and cost considerations.

In the post-World War II era, as society leaned heavily towards financialization, established appraisal practices faced criticism for their rigid and formulaic application, which failed to account for the rapid transformations occurring in real estate markets. A growing concern was the over reliance on mechanistic formulas that often overlooked economic realities, leading to a push for more analytical and statistical tools to improve empirical estimations. This period also saw the development of capitalisation rate concepts, with greater recognition that it served as a measure of investment risk across the entire property. The *band of investment* theory, which disaggregated the mortgage and equity components of real estate investment, gained traction as a method of better accurately assessing capital structure and returns (Vandell, 2007).

Despite these refinements, theoretical connections to value theory remained weak and the dominant appraisal frameworks relied heavily on applicable methodologies. While statistical tools improved precision, the field largely moved away from engaging with broader economic paradigms. By the 1960s, appraisal had evolved into a specialised technical discipline, but one that continued to lack a coherent theoretical foundation grounded in economic value theory.

#### 4.6.3. Analytical extensions

From the 1960s onwards, valuation methods became increasingly data-driven, incorporating more rigorous market analysis techniques such as simulation, modelling, and multiple regression analysis. This shift was underpinned by the development of hedonic pricing, particularly Rosen's (1974) model, which conceptualised property prices as the sum of their individual attributes. By regressing observed prices on property characteristics, this approach allows for the decomposition of market value into its constituent components, forming the theoretical basis for many automated valuation models (AVMs). However, this method relies on the availability of sufficient market transactions; an assumption that does not hold in less liquid segments, such as commercial real estate.

At the same time, the growing complexities of real estate investments also drove the integration of valuation with finance and economics, leading to the adoption of concepts like the capital asset pricing model (CAPM) and the weighted average cost of capital (WACC). Additionally, capitalisation theory evolved, moving beyond simple direct capitalisation to discounted income techniques. And valuation theory began acknowledging illiquidity, along with the unique risks and inefficiencies associated with property

markets with the influence of securitisation and real estate derivatives (Geltner, 2006). The rise of AVMs, enabled by advancements in computing technologies, has marked a significant shift in property valuation. However, despite these methodological advancements, neither AVMs nor traditional valuation approaches fundamentally altered the underlying theoretical framework, as both remained rooted in the positivist assumptions of neoclassical economics (Canonne & Macdonald, 2003).

The globalisation of real estate markets further spurred efforts towards standardisation, leading to the development of frameworks such as the European Valuation Standards (EVS) (Eurostat, 2017). Although these innovations expanded the analytical tools available to appraisers, they also deepened the reliance on financial models that often disregard the complexities of real estate as a heterogeneous and spatially fixed asset class. As a result, while valuation methods continued to evolve, they are frequently criticised for their mechanical application of models without fully understanding or integrating their theoretical foundations. One alternative to this dominant framing appears in the use of Amartya Sen's (1979, 1985, 1993) 'capability approach' in compulsory purchase valuation, where market-based compensation often fails to reflect the full extent of what claimants actually lose. Sen argues that the well-being contributions of the built environment extends beyond its market value, shifting the focus from exchange value to its 'functionings' otherwise known as, use value. More broadly, this application reflects a growing critique of neoclassical value theory, suggesting that valuation practice may benefit from function-based perspectives that move beyond market price alone.

## 5. Discussion

The review of empirical value theory shows how economic thought changes, often creating new paradigms as society's views shift over time. While no single definition of value has endured, the centrality of value theory in economic thought is undisputed. Economists have long debated its conceptual and practical difficulties, with discussions oscillating between labour – and cost-based theories of production versus demand-driven utility frameworks (Wendt, 1957). This evolution of value theory is contingent upon two key developments: the increasing dominance of exchange value, and the growing recognition of value as a subjective construct. The Marginalist revolution and neoclassical economics, in the realm of value (in)commensurability, created the tension between economic valuation and intrinsic, moral, or civic values, it has also abandoned a subject matter for a method (Levy, 2025).

In earlier periods, *value* as a construct was heavily influenced by ethical and moral considerations vis-a-vis the concept of a 'just price' aimed to ensure fairness in transactions. Over time, the focus shifted from what value *should be* to *what it is*: the purpose of their lay successors called not for a justification, but an explanation, of value (Sewall & Pigou, 1901). This historical progression reveals a movement towards exchange value as a dominant pillar – yet, distinctions between value-in-use and value-in-exchange remain contentious, since *exchange* itself, could be a form of *use* for certain commodities. That said, the two are not always neatly aligned in current practice. For instance, government land acquisitions for conservation or public infrastructure (such as national parks, highways, or eminent domain) often hinge on a property's pluralistic, sometimes incommensurable, forms of value and use; even



as its valuation remains tethered to a narrow interpretation of market price. A similar tension arises in the operationalisation of commercial real estate, side-lining how a property supports ongoing, *situated* use by various stakeholder groups (Rong et al., 2025). This creates a gap between how value is operationalised and what is actually lost or gained in such transactions. These shortcomings indicate that use value is not absent from valuation practice, but rather, it is persistently subsumed under exchange value and current valuation frameworks.

The rise of empiricism and the expansion of market economies introduced another transformation: money was no longer just a medium of exchange but became a measure of value itself. The ability to quantify and compare goods through price mechanisms shifted the focus from intrinsic value to market dynamics. As markets evolved, supply and demand played an increasingly important role in determining value. Focus also shifted towards contractual relations and market transactions which became the primary means of *assigning* value (Laird, 1929). This shift culminated in the neoclassical economic framework as associated with value monism and monetary reductionism – reducing value to a single indicator and enabling the comparison of goods through commensurability. All the while, exchange value, which was once treated as an objective measure (tied to production costs or intrinsic qualities), has shifted towards a more contingent view: one that accounts for individual preferences, utility, and demand. External conditions affect value as they impact the mind; to paraphrase Barbon, if the mind changes, things lose their value.

Additionally, environmental and social factors are no longer externalities but essential components of exchange value (also read: market risk) and value creation. The zeitgeist demands sustainability considerations to serve both as value drivers and as constraints on existing pricing models, influencing the behaviour of investors, developers, and policy-makers alike. Perhaps one reason this integration, while highly prescient and important, remains complex is that social and environmental values are inherently pluralistic and weakly commensurable; evidencing a new value theory in real estate economics.

### **5.1. Real estate economics: evidence for a new value theory?**

While value theory concerned itself with explaining the nature and causes of value, the present-day (three) approaches concerns itself with estimating/establishing market value as an expression of the most probable price (RICS, 2023). Full recognition has been given in economic writings to the difference between a theory of valuation and the practice of establishing values. Yet the birth of real estate appraisal follows the latter train of thought and has lost touch with the historical lessons of value theory. Following the neoclassical framework, it is removed from the subject matter at hand and has instead focused on the method: estimating a singular, monetary measure of market value (Lowe & Genovese, 2022).

This focus is further reflected in the methodological development, which remains anchored in refining the accuracy of market-based valuations while aligning with conventional financial metrics. For example, AVMs and mainstream valuation models continue to rely on past market transactions and statistical models without considering value theory or its pluralist values. The International Valuation Standards Council (IVSC) (2025) echoes this sentiment by providing various *bases of value*, but advocates

for structured techniques to valuation. The fundamental elements of real estate – exchange ratio, utility, scarcity, demand, ownership rights, investor behaviour, institutional context, and social conventions – are not fully reflected in its theory nor appraisal.

Hence, there is growing dissatisfaction with the appraiser's (three) approaches and this has fuelled a shift towards understanding behavioural influences, and broader socio-economic considerations and the future of valuation comes into question (Hodges, 2007). This dissatisfaction also raises questions about the validity of standard valuation approaches, particularly as they fail to capture the full spectrum of economic and non-economic values that shape real estate markets; raising fundamental questions: can conventional valuation theory capture the complexities of real estate value in contemporary markets? And more critically, does the traditional focus on exchange value obscure the role of use value in shaping real estate's value?

In light of the two key developments in value theory i) the increasing dominance of exchange value and ii) the growing recognition of value as a subjective construct, valuation theory must also evolve to reflect these realities. Firstly, neoclassical appraisal overlooks a fundamental reality: real estate transcends its current role as a tradable asset, and its value extends beyond exchangeability. *Use* value (encompassing spatiality, functionality, social utility, and long-term sustainability) plays a critical yet largely neglected role in the existing valuation of properties. While conventionally thought to be reflected in the market price, use value is often wryly reduced to the utility of *select* stakeholders (effectively, the use value of the one with the most purchasing power under neoclassical theory), despite a pluralist reality in which a property holds different kinds of value for different stakeholder groups. Therefore, we argue that use value should be understood as the value derived from a property's functionings, that is, the actual capabilities it supports, recognising the plural and often incommensurable values attributed to it by different stakeholders. This omission reflects a broader limitation: the prevailing valuation frameworks prioritise backwards-looking market-based comparables, and monetary metrics (Geltner, 2006), often failing to account for the fundamental and unique attributes of real estate such as its functionings, heterogeneity, and embeddedness in community and environment.

Secondly, valuation is not merely a financial exercise but rather it is an inherently social practice shaped by conventions, institutional norms, and subjective judgements; the ways in which individuals and groups develop, express, and evolve their values play a critical role in shaping decision-making and informing policy. Information asymmetries between various stakeholder groups – developers, communities, public agencies – further compromise the objectivity and completeness of value assessments (Diaz & Hansz, 2002). While market transactions may capture price signals, they do not necessarily reflect the full range. Historically, it evolved alongside socio-political economic shifts yet currently, it remains anchored in fixed, equilibrium-based assumptions – what Don Patinkin (1949) first named the 'classical dichotomy', separating the *monetary* and the *real*. Marginal utility theory narrowly focused on buyers and sellers, failing to account for broader benefactors of value (Akerlof & Shiller, 2010).

While the established supply and demand model of pricing continues; the rise of global concerns around sustainability matters (in the broadest terms) is likely to act as an increasing constraint on existing models and is to influence the decision-making of all stakeholders in real estate economics (Aigner et al., 2018). This historical trajectory

suggests that valuation is in evolution again, to not only reflect market forces but to incorporate the social, environmental, and functional dimensions of real estate value that existing theory fails to capture.

## 6. Conclusion

This paper presents the evolution of value theory, tracing its shift from an emphasis on use value to exchange value and from objective to subjective conceptions of worth. Contemporary misalignments in appraisal stem from the need to integrate a subject matter: value and its historical foundations alongside its methodology and tool of analysis. If valuation is to remain up-to-date, it must evolve to reflect these broader concerns, incorporating multiple dimensions of value and its stakeholders. The way societies evaluate trade-offs between environmental, social, and economic goals is not just a technical exercise, it is a reflection of the values that underpin economic systems. Understanding these dynamics offers the potential to challenge and rethink the foundations of real estate economics, questioning long-held assumptions and opening the door for more holistic valuation frameworks.

While this paper provides a broad overview of the evolution of value theory, it is not an exhaustive review. Instead, we suggest that this inquiry should start from the study of *value* as a subject matter instead of its *method*, the dominant counterpart, born of high abstract theory, that has dominated many different subjects (Coase, 2012). Engaging with the value discourse allows one to *challenge* the underlying assumptions of value in neoclassical economics. A promising avenue for future research lies in constructivist theory: incorporating collective decision-making for context-specific and public reasoned valuations. However, empirical research on this remains limited, as traditional appraisal methods prioritise market-based valuation over deliberative approaches. A shift in this direction may challenge conventional economic boundaries, potentially leading some to dismiss it as ‘non-economic’ (Spash, 2008). Yet this is potentially an outdated demarcation strategy, where disciplinary boundaries are reinforced and interdisciplinary research is dismissed despite empirical evidence. At the same time, policymakers and government agencies are increasingly demanding more practical comprehensive valuation frameworks. This integrated approach, informed by interdisciplinary insights, could provide a richer, more accurate reflection of the value of the built environment, especially at the local or regional level (Trainor, 2006).

Another area deserving research attention is the significance of policy interventions in the built environment. Notably, empirical methods have evolved significantly, allowing for a better capture of heterogeneity in value perceptions. Insights from new institutional economics, particularly its emphasis on the role of public policy, offer complementary insights into deliberative approaches. Shifting institutional rules, like environmental legislation, shape valuation outcomes, suggesting that blended approaches could better support theory and reformation of valuation guidelines.

What happens in research inevitably reflects upon what is taught in textbooks, classrooms, and manuals. Understanding the evolution of value theory is the first step in examining how societies evaluate trade-offs between environmental, social, and economic goals. Introducing this historical and theoretical foundation into education curricula could help students – and the professionals they become –

better tolerate or even challenge the frequent changes in the definition of value. This capacity is essential in order to accommodate political will and market dynamics and has the potential to question the very foundations of the societies we wish to build.

## Disclosure statement

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