

# **Value as capital-in-use: Unpacking the temporal impacts and managerial implications for organisational value**

## **Abstract**

Value is a widely researched and much debated topic, but one still characterised by conceptual deficiencies. While multiple competing value perspectives exist in the current literature, they provide limited insights in terms of temporal impacts and implications for organisational value creation. To address this gap, this conceptual article develops the notion of value as capital-in-use, which complements extant value literature by providing a capital-oriented perspective and conceptualisation of the nature, characteristics, and dimensions of value. We develop the concept by reviewing four categories of capital (physical, financial, knowledge, and social), and unpacking their dimensions in terms of locus, latency, temporality and convertibility, to distinguish the implications they each hold as potential sources of organisational value. Variations in the properties of the four categories of capital have management implications that are typically poorly recognised, especially in terms of costs and risk associated with latent or perishable capital. This paper contributes to current value theory by establishing its relationship to capital, and extending coverage of the temporal dimension of value.

## **Keywords**

Organizational Value, Social Capital, Human Capital, Knowledge, Latency, Value in use

## **1. Introduction**

The importance of the value concept is widely discussed in marketing, operations and the general management literature and a company's ability to provide customer value has long been recognised as the foundation of competitive advantage (Eggert, Kleinaltenkamp, & Kashyap, 2019; Lepak, Smith, & Taylor, 2007; Parasuraman, 1997). In its simplest guise, value is represented either as benefits accrued, net of costs and other sacrifices incurred in creating those benefits (e.g. Aarikka-Stenroos & Jaakola, 2012; Faroughian, Kalafatis, Ledden, Samouel, & Tsogas, 2012; Ulaga & Eggert, 2006), or as fulfilled customer goals (Macdonald, Kleinaltenkamp, & Wilson, 2016; Woodruff, 1997). This outline simplicity, however, belies the underlying conceptual complexity once issues relating to locus, latency, temporality and convertibility are considered.

In the context of business relationships for instance, value conceptualisations include tangible benefits and costs, such as revenue stream benefits for suppliers and implementation and management costs for buyers (Blois, 2004; Corsaro & Snehota, 2010; Grönroos, 2011). They also include intangible benefits, such as social contacts, market knowledge and reference commitments (Baxter & Matear, 2004; Biggemann & Buttle, 2012; Jaakkola & Aarikka-Stenroos, 2019; Walter & Ritter, 2003). Indirect elements, such as enhanced market knowledge and business contacts, are often located in individual employees rather than at an organisational actor level (Gonçalves, da Silva, & Teixeira, 2019). As such they may have a shelf-life as potential value sources, being available only whilst relevant individuals are employed. Value sources such as knowledge and contacts also have a shelf-life in that their utility may diminish with time or disappear completely.

Knowledge may be superseded by new discoveries or inventions, rendering it worthless. Business contacts may move on and reputational benefits may diminish over time. Such assets therefore may perish before any value is created. While such temporal effects are likely to have significant ramifications to a company's ability to create organisational value, contemporary marketing and management literature have provided only limited insights on their impacts and implications to value creation.

While earlier studies have examined why and how customer desired value (Flint, Woodruff, & Gardial, 1997, 2002) or customers' assessment of value in business relationships, may change over time (Lyons & Brennan, 2019; Macdonald, Wilson, Martinez, & Toossi, 2011), they are focused on customer perceptions of value, but shed less light on the temporal properties of the value concept itself. Similarly, while the emerging value co-destruction literature has explored why and how value perceptions may degrade over time (Marcos & Prior, 2017; Plé, 2017; Prior & Marcos-Cuevas, 2016), these studies too, focus on actor-related perceptions and behaviours, but not on the temporal properties of value sources specifically. Hence, unpacking the temporal dimension of value remains a critical yet poorly understood issue (Flint et al., 1997), and is yet to be addressed by a conceptual perspective that encompasses a broad set of value sources and assesses differences in their attributes that affect the delivery of organisational value. If value is fundamental to competitive advantage, then conceptual framing needs to improve the transparency of different value sources so that organisations are able to recognise and exploit all sources available to them.

This paper addresses the aforementioned gaps by adopting a capital-oriented perspective on value, (Cabiddu, Moreno, & Sebastiano, 2019; Lombardo & Cabiddu, 2017) and recognizing that value sources typically fall into one of four categories of capital: financial capital (e.g. cash or equity), physical capital (e.g. buildings and equipment), knowledge capital (e.g. skills and experience), and social capital (e.g. personal contacts). These categories of capital are collectively referred to as assets. Assets of any type only generate value when they are used. Idle assets do not create value, but the longer assets sit idle, the more they may degrade and incur maintenance costs, or even perish. However, such risks and costs are rarely integrated into existing theoretical frameworks on value (Eggert et al., 2019), accounted in current reviews and conceptualisations of value (Eggert, Ulaga, Frow, & Payne, 2018; Lindgreen, Hingley, Grant, & Morgan, 2012; Lindgreen & Wynstra, 2005), or acknowledged in ongoing value debates (Cabiddu et al., 2019).

Therefore, this paper contributes to the contemporary value literature (Eggert et al., 2019; Eggert et al., 2018; Lindgreen et al., 2012) by developing and extending a novel value as capital-in-use perspective. This provides new analytical tools and a capital-oriented perspective to unpack the dimensions of the value concept in terms of locus, latency, temporality and convertibility, and reveals their different value creation implications. By taking a capital-oriented perspective, we categorise different value sources and discuss their properties and inter-relationships with respect to organisational value creation. The resultant analysis provides much greater clarity on both the source and locus of the precursors of organisational value. The recognition of routes to value, and associated issues with latency and the potential perishability of value precursors, adds considerable

new insights to the temporal dimension of the value concept, which has been relatively scantily addressed thus far (Flint et al., 2002; Lyons & Brennan, 2019). The properties and dimensions of our capital-oriented perspective help to clarify value related terminology (Gummerus, 2013), and provide a new means through which routes to value creation can be profiled and managed, in different contexts. By highlighting the importance of human located sources of value, and their associated temporal risks and costs, managers are encouraged to take a more inclusive and urgent perspective on value, to ensure that tangible organisational value can be maximised.

The rest of the paper is organised as follows. First, we define our key terminology and summarise existing perspectives on value, and then we outline the key attributes for four categories utilised in our capital-oriented perspective on value. Next, we analyse these categories along the four dimensions through which their value creation potential is contrasted. Finally, the discussion collates a set of principles and proposes new definitions for value and value creation, grounded on capital-oriented axioms.

## 2. Current perspectives on value

While value continues to be one of the most important themes in the current business marketing research, issues with its conceptualisation remain intensively debated and surrounded by “a lack of clarity” (Eggert et al., 2019, p. 13). One reason for this is that value literature continues to hold several different perspectives and competing logics that suggest divergent conceptualisations, inconsistent axioms, and ambiguous definitions (Gummerus, 2013). In the following, we summarise key points<sup>1</sup> from different value perspectives, and highlight key issues and underexplored areas.

In the contemporary business marketing research, value is considered from four different perspectives: value-in-exchange, value-in-use, value-in-context, and value-in-acquisition (see Table 1). The first two are the predominant perspectives in business marketing research (c.f. Eggert et al., 2018; Vargo & Lusch, 2004), while the last two are emerging variants of value-in-use.

From a *value-in-exchange* perspective, value is conceptualised as perceived benefits net of acquisition costs. Value is embedded in physical goods and services, and progressively accumulated during manufacturing processes. In this view, value is primarily determined by the supplier, and objectively assessed at the point of exchange, in which price determines the balance of value appropriated by each party (Wagner, Eggert, & Lindemann, 2010). When the net benefits to a customer, of goods or services, exceed the price paid then a customer value premium is recognised (Bowman & Ambrosini, 2000).

From a *value-in-use* perspective, value is usually conceptualised as customer goal achievement (Macdonald et al., 2016; Woodruff, 1997), embedded in the intangible knowledge and skills of different actors, and jointly co-created by the customer and supplier (Grönroos, 2011; Vargo &

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<sup>1</sup> Given that value literature has been extensively reviewed elsewhere, we only summarise the main points to avoid repetition. For more detailed analysis and most recent reviews, please see Vargo & Lusch (2016) and Eggert et al., (2018; 2019).

Lusch, 2004). In this view, value is determined by the customer, and subjectively assessed during the service delivery and usage processes. When customer goals or desires are achieved, customer value is recognised and realised (Macdonald et al., 2016).

While value-in-exchange and value-in-use are the dominant perspectives (Vargo & Lusch, 2016), typically discussed as alternatives, value-in-use is also presented as a superordinate concept (Kowalkowski, 2011), with recent incremental contributions in the form of *value-in-context* and *value-in-acquisition* perspectives. From a value-in-context perspective, value is conceptualised as actors' exchange experiences (Chandler & Vargo, 2011) that unfold in, and are influenced by, unique social or cultural contexts (Akaka, Schau, & Vargo, 2013; Edvardsson, Tronvoll, & Gruber, 2011). In this view, value is phenomenologically determined by actors operating in a particular context and assessed over time as contexts continuously evolve and change.

As a newest addition to value literature, value-in-acquisition considers the sphere between value-in-exchange and value-in-use. Under the *value-in-acquisition perspective*, value is conceptualised as outcomes embedded in the acquisition process itself, and distinctly separate from the specific exchange and usage processes (Chipp, Williams, & Lindgreen, 2019). In this view, value is determined by the customer, and subjectively assessed during the acquisition process. When new value outcomes that are independent and separate from the exchange and usage processes emerge, value-in-acquisition is recognised and realised (Chipp et al., 2019).

### *2.1 Gaps in current value perspectives*

However, the current value perspectives outlined above, while insightful, provide relatively limited, if not mixed notions in terms of the temporal changes in the value concept, and its implications for different stakeholders. For example, from a value creation perspective, current perspectives argue that value is created at fixed points in time, either at the point of sale, or during usage when customer goals or desires are realised (Eggert et al., 2018). This view, however, does not address what happens between these times, when a customer has acquired goods or services, but is yet to utilise them in their own business or value generation processes. The value creation potential of different value sources when they are in a latent state remains unclear and under-explored.

From a value destruction perspective, similar issues persist. While prior research has explored how negative value perceptions form (Pinnington, Meehan, & Scanlon, 2016; Prior & Marcos-Cuevas, 2016; Vafeas, Hughes, & Hilton, 2016) or how value is (co-)destroyed in customer-provider relationships (Cabiddu et al., 2019; Järvi, Keränen, Ritala, & Vilko, 2020), these studies are primarily focused on actor-related engagement styles or co-creation practices, but not on the variations in the nature of the value concept itself. Thus, issues like how value potential may perish or deteriorate, or usage or ownership cost escalate over time have received very limited, if any attention.

Furthermore, while contemporary value literature has moved away from purely monolithic and organisational-centric value appraisals towards more team- and individual-based appraisals

(Kleinaltenkamp, Plewa, Gudergan, Karpen, & Chen, 2017; Macdonald et al., 2016), it still mostly assumes that similar value sources reside and are available in different levels. This provides only limited understanding on the dispersion, availability, and accessibility of value sources at different levels, and more granular insights are needed. Finally, while current conceptualisations of value acknowledge its multi-dimensional nature (Ulaga & Eggert, 2006), they have paid only limited attention to its convertibility, which is almost exclusively considered in terms of financial value or willingness-to-pay. However, issues such as the ease of, or sequences needed, to complete the conversion from one type of value sources to another remain woefully unexplored. Overall, it seems that several areas related to the temporal properties of value would benefit from more granular and integrated insights.

## 2.2 *Emerging perspective on value: value as capital-in-use*

Recent studies in industrial marketing and service research have suggested that value can be conceptualised and assessed in terms of variations in capital (see Cabiddu et al., 2019; Lombardo & Cabiddu, 2017). While these studies provide only preliminary insights, and do not explicitly consider value as capital-in-use, they provide important foundations for the development and refinement of this concept. In this paper, we build on the insights from these studies, unpack and delineate the concept of value as capital-in-use further, contrast it to other existing value perspectives, and explain how it can be used to address some of the earlier deficiencies in the value literature, particularly in terms of temporal impacts and implications.

In general, the terms *asset* and *capital* are usually used with similar but varied meanings across the marketing and management literature, as well as in practice. *Capital* often refers to *financial capital* alone. More confusingly the term *capital asset* is sometimes used to represent *physical capital*. In this article the term *asset* is defined as the generic term to encompass any form of capital. The term *capital* is used to represent a specific category of asset: physical capital, financial capital, knowledge capital or social capital.

Traditionally, assets are considered to have either exchange value or use value (Bowman & Ambrosini, 2000). An asset can be valued in terms of its exchange worth, and thereby quantified in monetary terms (Anderson & Narus, 1998) or be considered to generate value each time it used, and therefore creating value on multiple occasions, potentially over an extended period of time. This second view of an asset's accumulated utility is usually referred as value-in-use, but in this paper, we argue that it would be more accurately described either as capital in use or asset in use. In this paper we refer to this concept in terms of value as *capital-in-use*.

Considering value as capital-in-use has at least three important advantages through which it is able to complement current perspectives on value. Firstly, it goes beyond the dominant forms of financial or social value in the current literature, and gives equal primacy to other sources of value (Lombardo & Cabiddu, 2017). In this paper, we consider this in terms of different forms of capital: physical, financial, knowledge, and social capital. Secondly, it can accommodate sources of value that are static, latent, or in-use, and explain their differential impacts to value creation, thus providing a more fluid and inclusive analysis of value as an overarching concept. Finally, it

acknowledges implications and ramifications to both value creation and value destruction (Cabiddu et al., 2019). Considering value as capital-in-use enables us to examine how value is created or destroyed through the accumulation or degradation of different forms of capital, and provide more granular explanations on why this happens, and how it may differ at different levels of analysis.

As we subsequently discuss and demonstrate, under the capital-in-use perspective, value can be conceptualised as temporal changes or variations in the (net) worth of assets and embedded in different forms of capital. From this perspective, value is determined by any benefiting actor. Actors from individual to organisational and even networks and ecosystems may be accommodated (in this paper we focus on maximizing organisational value). From any actor’s perspective, value is the net change in worth of all owned assets, over a period of time. Value is created at discrete moments in time that may be summatively assessed over any defined period of time. Table 1 provides an overview of the different value perspectives, and in the subsequent sections, we unpack the value as capital-in-use perspective and its temporal implications in detail.

**Table 1. Overview of the current perspectives on value in marketing**

	Current perspectives on value				This study
	Value-in-exchange	Value-in-use	Value-in-use extensions		Value as capital-in-use
			Value-in-context	Value-in-acquisition	
<b>Value conceptualised as</b>	Benefits and costs	Goal achievement	Unique (exchange) experiences	Process outcomes	Temporally bound net variations in asset worth
<b>Value embedded in</b>	Physical goods	Knowledge & skills	Social or cultural context	Acquisition process	Different forms of capital
<b>Value forms</b>	Mostly tangible (operand resources)	Mostly intangible (operant resources)	Intangible (contextual experiences)	Intangible (affective & skill)	Tangible and intangible capital variation
<b>Value determined by</b>	Supplier	Customer	Actors in a particular context	Customer	Can be applied to any actor context
<b>Value assessment based on</b>	Exchange unit	Usage episode	Exchange experience	Acquisition process	Changes in net capital
<b>Nature of value appraisal</b>	Objective and transactional	Subjective and relational	Phenomenological and relational	Subjective, emotional, relational	Subjective or objective (depends on tangibility)
<b>Value appraisal focused on</b>	Output	Process	Context/experience	Acquisition experience	Can be applied to any context
<b>Foundational literature</b>	Zeithaml (1988); Anderson and Sullivan (1993); Ulaga & Eggert (2006)	Vargo & Lusch, (2004; 2016); Grönroos (2011); Macdonald et al. (2016)	Chandler & Vargo (2011); Edvardsson et al., (2011); Akaka et al., (2013)	Chipp et al.(2019)	Lombardo & Cabiddu (2017); Cabiddu et al. (2019)

### 3. Categories of capital relating to value

The term *capital* is used to represent diverse assets available to trading organisations, and its meaning has varied and been extended over time under the contrasting influences of economists and sociologists (Hodgson, 2014). In this paper, we resolve these issues by defining four categories of capital and only using the term capital in the context of these categories. The term *asset* is used to refer, collectively, to all categories of capital.

#### 3.1 Physical capital

In economic theory, physical capital typically refers to production related items used to transform inputs into products and service. The physicalised perspective on capital, focusing primarily on production-means, rather than the money invested in production, is attributed to early economic theory (Hodgson, 2014). These physical inputs are *factors of production* and are variously defined to include labour, land and capital (as buildings and machines) (Mankiw & Turner, 2010), natural resources, labour and capital (Wetzstein, 2013) or factories, buildings, machines, tools and equipment (Turner & Shockley, 2014). Early conceptions of physical capital often encompassed labour, regarding it as a production resource similar to production machinery but with the ending of slavery, labour (human capital) is typically separated from other production factors, and distinguished as a non-tradable resource (Hodgson, 2014).

Whilst property, plant and equipment typically now comprise physical capital, land and production stock have also been considered as physical capital. Farm stock and crops for instance, have at various times in the last 150 years, been accounted for as physical capital (Turner, Tamura, & Mulholland, 2013). Land is typically accounted for separately because it is less readily exchanged for another form of capital, but for the purposes of this paper, any owned physical resource that is a tradeable asset, constitutes physical capital. Similarly, we include materials and unsold stock, as owned, tradeable assets. Physical capital is therefore defined here, to encompass all owned land, production factors and production materials.

Physical capital is the most visible and tangible asset form, with predictable depreciation rates that can be readily reflected on company balance sheets. These assets constitute an inert use value for an organisation when not deployed (Bowman & Ambrosini, 2003). Ownership of physical capital is readily established, compared with knowledge and social capital, and readily linked to organisational actors.

### *3.2 Financial capital*

From a financial perspective, the term capital is often used to represent financial resources invested in, or available to an organisation. The financial investment perspective on capital remains at the heart of accounting views of business investment (Hodgson, 2014). Financial capital often refers to the monetary value of owned assets or the book value of the stock at the end of a period (Hodgson, 2014; Tseng, Lin, & Yen, 2015), but in this paper, where we separate physical from financial capital, the latter is defined to encompass symbolic (non-physical), tradeable financial assets only. This includes items such as cash, debtors, bonds and equity assets (in other companies) but specifically excludes the book value of physical assets. Certain forms of financial capital, that are immediately accessible and transformable, constitute the most liquid forms of capital, but not all financial capital is immediately accessible and may require conversion to a more liquid form prior to a transaction.

In discussions on financial capital relating to value, distinction is needed between owned assets, debt capital and equity capital. Debt capital, such as loans or issued bonds, provides access to finance in which ownership resides elsewhere. This is a negative asset that must be repaid (with interest), unlike equity capital (Bolton & Freixas, 2000). Equity capital generates owned assets (typically cash), through share issue, that are available for conversion into other asset forms (e.g. the purchase of equipment). Typically, firms need to balance their use of debt and equity capital, to maintain the cash generating potential of shares by avoiding over-dilution (Berger, Herring, & Szegö, 1995; Bolton & Freixas, 2000). Financial capital, unlike other forms of capital, must therefore be considered to be a signed variable, in which reduction of debt and increase of owned assets, are both of value.



### 3.3 Knowledge capital

Organisational learning processes and knowledge are a basis for competitive advantage for a firm (Beesley, 2004; Easterby-Smith, Lyles, & Tsang, 2008; Phelps, Heidl, & Wadhwa, 2012). Knowledge is defined as the capacity to act (Nonaka & Von Krogh, 2009) and is recognised to exist in two predominant forms: tacit (embodied) knowledge, and explicit (codified) knowledge. Tacit and explicit knowledge should not be regarded as a dichotomy, but rather as the extremes of a continuum of knowledge ranging from highly intuitive skills and responses of an expert individual, at one extreme, to well documented, clearly articulated explicit knowledge at the other extreme (Nonaka, 1994).

Fundamentally, knowledge is created in individual actors, but through social bonding becomes shared within teams (Coleman, 1988) and broader collectives, including organisations. Within the organisation, knowledge is located at individual, group and organisational levels (Knight, 2002). *Human capital* represents the knowledge, acquired skills and abilities of individuals (Crook, Todd, Combs, Woehr, & Ketchen Jr, 2011), whilst *collective knowledge* (Spender, 1996) and *intellectual capital* (Nahapiet & Ghoshal, 1998) represent collective and organisationally-centred knowledge respectively.

At an organisational level, explicit knowledge is readily apparent through designs, patents, processes and other codified elements. It is tangible and exchangeable. Implicit (tacit) knowledge however, is embedded in the routines and beliefs of its employees and needs to be regarded as more than the sum of its parts, such that cognitive structures and behavioural patterns survive the loss of individuals (Knight, 2002). In their definition of *intellectual capital*, Nahapiet and Ghoshal (1998, p. 246) describe such collective knowledge as a “socially and contextually embedded form of knowledge and knowing” that describes an asset with an immediate capacity for value-creating action. Intellectual capital is dependent on the bonding social capital of the collective, and therefore, may be considered to be comprised of human capital and social capital (Nahapiet & Ghoshal, 1998). Knowledge embodied in the workforce provides a competitive advantage especially where it is a firm-specific and difficult to imitate resource (Crook et al., 2011).

Knowledge takes time to accumulate and transfer between actors, especially tacit knowledge (Nonaka, 1994). Its development is both facilitated by, and facilitates, the development of other forms of capital. Knowledge as an asset, is most valuable when it is already routinised and can be immediately productive, but also where it is least readily transferred between organisations. In common with other assets, knowledge capital is not always valuable and the time and expense incurred in its development may exceed the derived benefits (Crook et al., 2011).

### 3.4 Social Capital

The concept of social capital has been established in the sociology literature over the last 50 years, but receives relatively sporadic treatment in management literature generally, and the value literature in particular. Social capital is the least tangible form of capital and therefore the most challenging to link with value, especially for organisational actors. It is also important to distinguish between the bonding (strong tie) and bridging (weak tie) forms of social capital that have different properties and value implications.

Strong ties are formed where team members interact and communicate frequently such that they develop shared tacit understanding (Coleman, 1988), establish strong trust and commitment, and can be relied upon to observe group norms (Portes, 2000). Highly bonded, trusting groups are able to deal with task uncertainty (Adler & Kwon, 2002) and cooperate to solve complex problems and lead to competitive advantage for businesses. Closely bonded groups are effective at solving complex problems that relate to existing shared knowledge, but are inefficient when access to new resources and ideas is required (Adler & Kwon, 2002).

Weak ties are social links with acquaintances from different social groups (Granovetter, 1983). These links are most valuable where they bridge structural holes in networks and connect previously unconnected groups (Burt, 1992), thereby providing access to new resources and knowledge. Weak ties therefore have innovation potential because links to diverse groups may help to stimulate ideation, or provide examples of idea use in one context, that may readily be exploited in another (March, 1991). Weak ties are established relatively quickly and individuals may therefore establish much larger networks of weak links than would be possible with close links, thereby increasing their prospects of accessing valuable information. Weak ties do require maintenance, however, because contacts may change roles, employers or location. Whilst strong ties are located in teams, weak ties are established by individual employees (with personal external networks), so organisations are vulnerable to the loss of this social capital if the individual leaves.

Social capital is also discussed in the context of inter-organisational relationships where socialisation processes further the development of *relational capital* (Cousins, Handfield, Lawson, & Petersen, 2006). The investment in knowledge exchange by collaborating teams build relationship-specific assets that generate superior profits (Cousins & Lawson, 2007). Specifically, the term relational capital refers to team-located trust, as one of three dimensions of social capital (Nahapiet & Ghoshal, 1998), but in inter-organisational contexts may be used to assess tie-strength (bonding) at an organisational actor level (e.g. Whipple, Wiedmer, & Boyer, 2015). A related, but distinct concept, is that of customer equity (Kumar & Reinartz, 2016; Persson & Ryals, 2010) which encompasses the anticipated aggregated worth of customers to a firm. Whilst also a form of relational capital, customer equity takes a supplier perspective to estimate the aggregated financial potential in the relationship (Kumar & Reinartz, 2016).

The intangibility of social capital, and its relational locus, raise questions about its validity as a form of capital. Following Coleman (1988), who concluded that both human and social capital shared enough properties to be reasonably considered as capital, Adler and Kwon (2002, p. 22)

also concluded that “social capital falls squarely within the broad and heterogeneous family of resources commonly called "capital"”. Like other forms of capital, social capital is long-lived and an asset into which other resources may be invested. It is appropriable and convertible, though being less liquid than other forms it is harder to convert. Social capital can substitute for, or complement other forms of capital. The effects of shortages of finance for instance may be countered in the short-term through relationship trust (Adler & Kwon, 2002).

One of the important distinctions between social capital and other categories of capital, is that holders of social capital are not necessarily the beneficiaries of its use (Coleman, 1988). The “enforceable trust” of the bonded group, for instance, enables beneficiaries to appropriate favours from other members of the group (Portes, 2000, p. 9). The primary categories of capital discussed in the paper are summarised in Table 2, with other relevant commonly used terms positioned as sub-categories.

**Table 2. Categories of capital relating to B2B value**

Categories of Capital	Sub-Categories	Description
Physical Capital		Owned physical assets, including factors of production (Mankiw & Turner, 2010), land and stock (Turner et al., 2013).
Financial Capital		Cash (liquid financial capital) plus indirect financial instruments (e.g. shares, owned bonds), and debtors, which can be used indirectly to raise cash (Bolton & Freixas, 2000).
Knowledge Capital	Tacit knowledge	Combination of accumulated understanding and <i>knowledge experience</i> through which capability (value potential) of individuals is enlarged (Nonaka, 1994)
	Explicit knowledge	Readily communicated, codified designs, facts, propositions, or processes (Kogut & Zander, 1992)
	Human Capital	Knowledge, skills and abilities of staff including explicit and tacit knowledge (Crook et al., 2011)
	Intellectual Capital	Organisationally-centred knowledge assets, includes explicit designs and patents and implicit team based routines (Nahapiet & Ghoshal, 1998)
Social Capital	Bonding SC	Strong tie bonds linking members of highly socialised groups. Can be intra-organisational or inter-organisational (collaborative) collectives (Coleman, 1988)
	Bridging SC	Employees’ weak ties that bridge structural holes in inter-personal relationship networks (Burt, 1992; Granovetter, 1983)
	Relational Capital	Aggregated benefits pertaining to an inter-organisational relationship. Sum of benefits occurring at organisational, team and individual actor levels – where these are attributable to a particular relationship. May also therefore include human and social capital (Cousins et al., 2006). Customer equity is an aggregated valuation of customer relationships to a firm (Persson & Ryals, 2010)

#### 4. Developing a capital-oriented value-model across four dimensions

Four categories of capital have been discussed as sources of organisational value. In this section those categories are contrasted along four dimensions: locus, latency, temporality and convertibility, to reveal their different value creation implications.

These dimensions are examined because each encompasses challenges to organisations in maximising their value creation. The locus dimension recognises that use of an asset may generate value for individuals or teams rather than the organisation directly. Latency recognises that assets only generate value when used, whilst in temporal dimension and different categories of capital exhibit different risks of depreciation or even perishing. The convertibility dimension covers the ease with which the asset may be deployed to create additional capital and/or the ease with which it can be converted into another form, especially financial capital (fungibility).

##### 4.1 Locus

Value is typically discussed in relation to organisations, but the use of assets available to an organisation often creates value that is not directly owned or useable by the organisation. Weak tie (bridging) social capital for instance, is as an asset of the individuals involved that is lost if the owning employee leaves. Strong tie (bonding) social capital, by contrast, is a team asset (Coleman, 1988) that remains accessible to an organisation beyond the loss of one or two individuals (Table 3).

Knowledge capital may be simultaneously located at individual, team, organisation and even network levels (Beesley, 2004; Knight, 2002). For collective actors, distinction is needed between knowledge held by all members of a group, and group-knowledge. In the former, the group is the sum of its individual parts, whilst in the later, the group shares tacit understanding leading to synergistic performance that exceeds the sum of its parts. This tacit knowledge is shared with new group members. This shared tacit knowledge is also called collective knowledge (Spender, 1996).

At an organisational level, *relational capital* as manifest through enhanced trust and commitment, is represents a form of collective social-capital (Nahapiet & Ghoshal, 1998) with a well-established link to inter-organisational relationship performance (Morgan & Hunt, 1994). In collaborative business relationships, social capital is established at inter-personal, team and inter-organisational levels. Enhanced brand reputation, and associated *reference capital* is located in the organisational relationship, as long as it survives the loss of key individuals. Similarly, facilitated market access (Walter & Ritter, 2003) is an organisational asset, but its effectiveness may be dependent on specific individuals (e.g. a specific referee in a client organisation). These forms of capital exist in addition to individuals' social capital, established within collaborating inter-organisational teams, and the knowledge capital accumulated through the relationship. Relational capital therefore is dispersed, in its different forms, across actor levels within a collaborative relationship.

The challenge to both existing and potential collaborators is two dimensional. They need both to recognise the different forms of potentially value generating capital, and their locus in order to ensure that they are actively exploited, and transformed ultimately into organisational value.

**Table 3. Locus of different categories of capital**

Categories of capital (ordered by visibility)	Locus of assets		
	Individual & inter-personal	Team	Organisational & inter-organisational
Physical capital	Personal tools, PPE, cars and phones	n/a	Production factors: Buildings, equipment (incl. input goods & land for this discussion)
Financial capital	Individual assets relevant to B2C rather than B2B contexts	n/a	Cash, financial instruments (e.g. shares, credit notes) and financial abstractions (e.g. profit)
Knowledge capital	<i>Human capital:</i> Explicit knowledge & tacit skills	Collective knowledge shared tacit understanding	<i>Intellectual capital:</i> patents, designs, IP & embedded learning
Social capital (lowest visibility)	Bridging capital: weak tie contacts	Bonding capital leading to trust and a committed sense of obligation	<i>Relational capital:</i> of inter-org collectives. References, brand and customers are assets of the focal firm

## 4.2 Latency

Assets exist as inert sources of value until utilised (Bowman & Ambrosini, 2003). In this paper, any form of capital that is not currently being productively utilised is considered to be in a *latent* state with respect to value creation. Each of the four categories of capital exists, in an inactive *latent* state (Table 4), and there may be a considerable lag between its creation and its subsequent use in value creation.

Physical and financial assets may exist in a latent state, but the value potential of capital assets is more visible and more readily realised, for example through rental or sale of a physical asset, or investment of financial assets. Knowledge capital may exist in a latent state for a longer, especially if its potential is unappreciated, or difficult to realise. The risk that knowledge capital remains latent may depend both on its form and its locus. The form of knowledge may vary across a continuum from very explicit and readily communicated, to highly embedded tacit knowledge that may only be passed on through a complex, spiralling process of transformation and absorption (Nonaka, 1994). Knowledge may also exist as human capital owned by individuals, or be shared by groups, organisations and even networks (Knight, 2002). Explicit knowledge located within an organisation (Intellectual capital), such as a design, prototype or patent, is identifiable and therefore most likely to be exploited for its value-bearing potential. Implicit knowledge, located within individuals or small teams is much less visible, and its value creating potential may be much less clear. Localised tacit human capital is therefore much more likely to remain latent.

**Table 4. Examples of latent (idle) capital by category**

Categories of capital	Examples of Latency
Physical capital	Unused buildings and equipment likely to deteriorate in exchange value whilst incurring cost.
Financial capital	Un-invested cash (e.g. non-interest bearing account)
Knowledge capital	Any tacit or explicit knowledge source, located at individual, team or organisational level not being utilised. Experienced worker, trained staff, idle teams or unused designs or patents
Social capital (lowest visibility)	Any idle source of social capital. Weak ties remain predominantly in a latent state.

### *4.3 Temporal effects*

Temporality is well recognised as a dimension of value (Faroughian et al., 2012; Grönroos & Voima, 2013; Lindgreen et al., 2012) especially with respect to relational value. Tacit knowledge and relational capital take time to establish (Pinnington et al., 2016) and at least in relational contexts, value needs to be considered as an accumulation of past, present and future value creation episodes (Lyons & Brennan, 2019). However, the predominant focus on value creation episodes takes insufficient account of negative value effects over time.

Time affects the value equation in at least three other respects: benefit and cost asynchrony, the impact of increasing maintenance costs over time, and the increasing risk that the asset may perish and bear no future value (Table 5).

Benefit and cost asynchrony occurs where benefits are realised over different time periods to the costs incurred. It may be some time after an asset is utilised before benefits are created, and those benefits may be created incrementally over an extended period. Some assets may also sit in a latent state for an extended period. The cost of creating social capital, or developing a knowledge asset has already been borne, but there may be an extended lead-time to value creation if the asset remains unused. There may also be a delay before an asset can be used. Knowledge gained of a more efficient production technique, for instance, may have an implementation lead-time for the purchase and installation of new equipment and the training of operators.

Maintenance requirements vary for each category of capital. Maintenance consumes resources that represent an escalating cost over time that can overwhelm profitable value creation (Bowman & Ambrosini, 2003). The longer the period before an asset is used, the greater the accumulated costs and therefore the lower the value (assuming benefits remain constant). Maintenance requirements for physical assets, including buildings and machinery, are relatively predictable. Like physical capital, but unlike financial capital, knowledge and social capital also incur maintenance costs. Personal relationships may weaken over time unless maintained, and personal knowledge, periodically, may need to be refreshed. Knowledge evolves continuously and existing knowledge needs to be updated to maintain its cogency. Ongoing socialisation is needed to maintain previously established bonding social capital.

Knowledge and social capital are also particularly prone to the risk of perishing. Knowledge may be superseded by newer knowledge. Social capital of weak ties is vulnerable to the dynamics of the labour market which may see contacts move position or change responsibilities. The value of weak ties may also be eroded where network density increases such that links no longer bridge structural holes in the network (Burt, 1992). Physical capital also may, in certain circumstances, may suddenly become obsolescent. The emergence of newer more efficient or effective equipment may render existing models obsolescent, but otherwise capital assets depreciate more predictably than is the case with softer forms of capital.

There are clear implications for value: the longer social and knowledge capital remain latent, the greater their aggregated maintenance costs, whilst potential benefits may be eroded by changes in circumstance or perish altogether.

**Table 5. Temporal effects for different categories of capital**

Categories of capital	Temporal effects		
	Maintenance	Perish risk	Value timing
Physical capital	Most incur continuous maintenance costs. Largely predictable.	Obsolescence risk. Insurable failure risk.	Incremental as each use contributes benefits that ultimately may exceed costs
Financial capital	Low in most cases	Certain high-risk instruments may perish suddenly.	Incremental through investments
Knowledge capital	Unused skills may degrade over time	Knowledge can be lost or be superseded. Knowledge holders may leave.	Incremental through use (at individual, team or organisational levels)
Social capital (lowest visibility)	Weak tie contacts need periodic renewal or use to maintain their utility. Bonding capital needs continuous use to prevent decay	Social capital holders may leave. Weak ties in other locations may move or leave	Incremental through use (at individual, team or organisational levels)



#### 4.4 Convertibility

In the preceding sections it has been recognised, firstly, that not all assets available to an organisation are permanently bound to the organisation, secondly, value generated through use of an asset may not be located at an organisational level, and thirdly, value potential typically deteriorates over time. When assets are used productively they may increase the same category of capital (human capital used to increase knowledge) or to increase several sources of capital (human capital used during a production process that also increases personal experience).

The ease (or difficulty) with which an asset may be converted to another form of capital, we refer to as its convertibility (Table 6). Organisational value is often discussed in terms of monetary worth. The ease with which an asset may be converted into (or used to generate) financial capital specifically, is its *fungibility*. Value-in-exchange logic typically focuses on the point of conversion when tangible goods or services are converted to financial capital.

Assets also vary in the number of transformations that need to occur before an organisation would consider that tangible organisational value had resulted. Distinctions have previously been made between direct and indirect forms of value (e.g. Walter & Ritter, 2003). Organisational value directness is therefore defined as the number of transformation steps required for the use of an asset to positively impact an organisation's primary outcome goal (distributable assets typically for a commercial organisation). The ease with which created value may be related to bottom line performance is its directness (or indirectness). Secondary value-chain services such as facilities management, or human resource management, make an indirect contribution to the bottom line. The same service may be more direct in some contexts than others. Staff recruitment services have a more direct effect on bottom line performance in the case of assembly-line workers than with back-office staff for instance. Social capital and human capital may be utilised in each case, but have more directly attributable value in each context.

Assets may also be indirect in the sense that they need to be combined with other assets, included those from different capital categories. Knowledge, bonding social capital and production assets may all be required in a skilled production or service delivery context.

**Table 6. Convertibility of capital categories**

Categories of capital	Convertibility	
	(In)directness	Fungibility
Physical capital	Direct source of value where input goods used to create outputs. One level of indirection with production equipment and, further levels of indirection for offices and equipment supporting secondary value chain	Mostly, readily saleable subject to market constraints
Financial capital	Most direct where liquid capital used to create additional financial capital. One level or more of indirection where exchanged in factor markets for input goods, production equipment or other capital categories.	Some assets may be committed for a time and not be tangible
Knowledge capital	Transfer and conversion of tacit knowledge may be several stages removed from production activity or financial capital generation.	Explicit designs and patents are directly fungible (intellectual capital).
Social capital (lowest visibility)	Very indirect. Bridging capital centred on individuals is the most indirect. Organisationally centred relational capital, brand reputation etc. may still be several stages away from tangible organisational value creation	Mainly intangible and not directly convertible to cash.

## 5. Discussion: implications for the value concept

Despite a wealth of literature on value over 40 years, debates still continue over the accepted, consistent, and contextually suitable conceptualisations and definitions of value (Eggert et al., 2019; Gummerus, 2013). In this paper, four categories of capital are discussed in relation to organisational value creation and four key issues impacting value creation, are reviewed. In this section, we collate the implications from these four sets of analyses as the backdrop to a set of key principles that collectively establish the temporal characteristics of value.

### *5.1 Value as capital-in-use as an underpinning value logic*

In this paper, we argue that value is the result of productive use of one or more forms of capital. Capital can be used to create more of the same form: knowledge used in learning processes to further increase knowledge, social capital networks used for further networking, and financial capital investments, are examples. Different capital forms may be combined to increase the same or other forms of capital: consultants draw on knowledge and social capital to make money. In all these cases, value is considered to be the net increase in assets (across all forms of capital). Different forms of capital also have distinct properties in terms of locus, latency, temporality and convertibility, which have specific implications for value creation. These are discussed in detail in section 4, and summarised in table 7.

Value as capital-in-use is a complementary underpinning logic through which commonalities and differences in other perspectives, such as value-in-exchange or a value-in-use, can be contrasted, and variations such as value-in-context explored. The capital-in-use perspective ensures that the timing and locus of conversions between categories of capital are considered for their net impact on value. Aggregate concepts, such as customer equity, can be explored to reveal how and when social and knowledge capital are utilised to create financial capital, whilst also weighing the potential for value destruction over the temporal horizon of an evaluation.

From a value-in-exchange perspective, value is the net change in assets resulting from an exchange. From a value-in-use perspective, value can be assessed in discrete quanta relating to each usage episode of an asset, or summatively assessed for all use across a longer period. In all cases value is the net-change in assets over a defined period of time.

From a value-in-exchange perspective, any category of capital should be valued in monetary terms (Anderson & Narus, 1998). Physical capital is easily quantified in exchanges for other goods or for financial capital, but relatively intangible human and social capital are difficult to value in monetary terms. Social and human capital located in individuals and their relationships is not tradeable by organisations. For organisations, knowledge capital needs to be codified (explicit) and embedded in tangible specifications or patents to be readily exchangeable. From this perspective, assets (from any categories of capital) are converted, typically, into financial capital.

From a value-in-use perspective, each category of capital only creates value at the point of use. The asset itself sits in a latent state, generating no value, whilst not in use. Production equipment and premises machinery, contribute value progressively over time, the more they are used.

Financial capital also, generates value only when used (to buy physical capital, or invested to generate additional financial capital). The value-in-use perspective provides more explanatory power than value-in-exchange in relation to knowledge and social capital. Incremental benefits are discussed for these categories of capital, similar to other categories, but different risk and cost attributes are noted, increasing the sacrifices side of the value equation progressively, over time.

As an extension of value-in-use, these same effects on capital apply to a value-in-context perspective but additionally the complex implications of unique combinations in inter-actor experience can also be reflected in social and knowledge capital at individual (micro) and organisational (meso) levels (Chandler & Vargo, 2011). In the case of value-in-acquisition (Chipp et al., 2019), much of the value described is personal and affective, arising in a B2C context, and is not likely to be a source of organisational value. The learning experiences associated with acquisition are however highly relevant to B2B contexts and constitute sources of both tacit and explicit human capital that condition subsequent exchanges.

From a capital-oriented perspective, value destruction (Järvi et al., 2020; Prior & Marcos-Cuevas, 2016) is any event, or time-period in which total asset worth has decreased. The nature of capital, discussed in this paper, is such that value destruction is *not* the simple opposite of value creation (c.f. Plé, 2017). Value destruction may result from active use of one or more forms of capital that results in a decrease in net asset worth, it may also arise passively, from the non-utilisation of capital during which it depreciates and/or incurs maintenance cost.

**Table 7. Orthogonal framework summarising the capital-oriented perspective on value**

Category	Locus	Latency	Temporal	Convertibility
Physical Capital	Mainly organisational assets: factors of production, land and production materials	Examples: unused buildings, time between equipment use including set-up time	Maintenance: most incurs regular but predictable costs Perish risk: some risk of obsolescence Value timing: source of incremental value through productive use	Direct source of organisational value and readily converted to cash
Financial Capital	Mainly organisational assets: cash and financial instruments, including shares, credit notes etc.	Examples: un-invested cash	Maintenance: low costs Perish risk: certain instruments carry a risk of perish Value timing: source of incremental value through investment	Readily convertible through purchasing into physical capital and some knowledge capital. Some instruments may require additional conversion steps
Knowledge Capital	Human capital: personal skills and knowledge (explicit and tacit)  Collective knowledge and skills of teams  Organisational assets: tangible intellectual capital, including patents, IP and designs	Examples: Under-utilised skills and learning. Time between each use of knowledge	Maintenance: periodic use of skills and knowledge needed to prevent decay.  Perish risk: especially for knowledge in dynamic contexts.  Value timing: source of incremental value through application, especially for further knowledge capital	Several stages may be needed before tangible organisational value realised  Only codified intellectual capital readily saleable by the organisation.  Priority to utilise these assets before they decay or perish
Social Capital	Bridging capital of individuals' weak ties  Bonding capital of teams  Relational capital from inter-organisational relationships, brand reference etc.	Examples: Under-utilised or inappropriately used team skills  Weak ties predominantly are latent  Established organisational reputation not being used to develop more business	Maintenance: weak ties may decay or details may perish where contact is lost  Perish risk: bonding capital, similar to human capital, requires periodic use to maintain efficacy  Value timing: organisational relational capital decays over time. Needs to be utilised as soon as possible	Several stages may be needed before tangible organisational value realised  Little is directly saleable by the organisation  Priority to utilise these assets before they decay or perish

## *5.2 Underpinning principles for value as capital-in-use*

From the preceding discussions, we can summarise the key underpinning principles of value as capital-in-use and through which, we can re-define value, value creation, and value destruction.

### *Principle 1: Value results from a net change of worth of a set of assets*

Value defined in terms of net changes to assets, enables integration of many sources of value: e.g. performance, cost (Blois, 2004), innovation, market access (Walter & Ritter, 2003), relationships (Macdonald et al., 2016). Net assets are signed to recognise that actions may create or destroy value and that increases in one form of capital may be countered by reductions in other forms. Conversion of one form of capital to another does not necessarily create value. Researchers and practitioners alike can utilise the framework in Table 7, to envisage and evaluate novel combinations and uses of assets, for their net value potential. This logic can be applied generally, for instance to assess the value of staff training, or specifically to evaluate offerings integrating products and services. Advanced service solutions can impact short-term profitability for providers, and may be inadequately assessed unless the enhanced knowledge and relational capital are surfaced and factored into strategic decision making.

### *Principle 2: Value results only when an asset is used productively*

Perhaps inevitably, value research focuses on moments of value creation and pays insufficient attention to the intervening periods in which assets sit in an unused, latent state. Idle assets do not create value. Asset use does not guarantee value creation. A predominant focus on value creation through use, can lead to under-assessment of value destruction (Plé, 2017). Output is signed, and value is only created where net assets increase. This applies equally to all four categories of capital.

### *Principle 3: Value is destroyed by capital depreciation and maintenance*

An idle asset may still incur costs associated with its maintenance. Each of the four categories of capital have different rates of depreciation and different maintenance costs that constitute an ongoing example of value destruction. For human capital and weak tie social capital there is an increasing perish risk with time. Maintenance costs are, for the most part, overlooked in existing value models (Kumar & Reinartz, 2016). A capital perspective ensures that periods of gradual value destruction are also integrated into net value assessments over time, providing a basis for research on value destruction that goes beyond actor perceptions (Prior & Marcos-Cuevas, 2016) by taking into account temporal properties of different categories of capital (Cabiddu et al., 2019).

### *Principle 4: Value is transient*

Value is created or destroyed at discrete moments in time. As soon as a value-creating event is complete, the asset is once again in a latent state with respect to value creation. In its latent state, the asset will once again depreciate and begin to incur maintenance costs. Value occurs at a moment in time, according to the logic employed (e.g. in moments of product creation; exchange; or customer use (Grönroos & Voima, 2013)) but only the change in asset worth endures. This temporal principle emphasises the importance of addressing the currently under-developed temporal dimension (Lindgreen et al., 2012). Studies of value creation leave open the important

question of what happens between moments of value creation, an issue that can be addressed through a capital perspective where assets provide continuity as points of reference.

*Principle 5: Value depends on the rate of use of an asset*

Total value created over a period of time is the aggregate of value-in-use moments in that period (Kumar & Reinartz, 2016) and is therefore a function of both the size of each value creating event, and their frequency. Net value must also take account of value destroying events discussed in principle 3, so the more frequently an asset is used the more likely it is that net value will be positive. This applies to all four categories of capital. Temporal perspectives on value creation can be historically reflective, present continuous or future potential (Lyons & Brennan, 2019) but these principles can be applied equally to any time horizon.

Finally, from the arguments developed through the paper we are also able to derive new value definitions:

*Value* is the net change in worth of a set of assets over a defined period of time.

*Value creation* is any utilisation of assets that increases the net worth of a set of assets.

*Value destruction* is any event that decreases the net worth of a set of assets.

Table 8 summarises the five principles underpinning the arguments developed in this paper, and provides examples of the some of the diverse research opportunities arising from these principles and the logic associated with value as capital-in-use.

**Table 8. Foundational Principles**

<b>Principle</b>	<b>Overview</b>	<b>Indicative future research</b>
1. Value results from a net change of worth of a set of assets	Capital-in-use logic integrates multiple sources of value into net assessments. Signed to recognise value destruction. Summative to capture positive and negative effects across multiple categories of capital. Capital conversion alone does not generate value	RQ1: Can all assets be utilised more productively through an integrated evaluation of value potential?  RQ2: From a capital-in-use perspective, do complex offerings that integrate goods and services, add or destroy value for suppliers?
2. Value results only when an asset is used productively	Idle assets do not create value  Utilised assets may create or destroy value	RQ3: How should organisations identify and exploit their knowledge and social capital more productively?  RQ4: What factors constrain the productive deployment of each form of capital?
3. Value is destroyed by capital depreciation and maintenance	Idle assets depreciate over time and incur maintenance costs, this is ongoing value destruction. Perish risk increases with time for some types of capital	RQ5: How much of the value destruction in organisations are managers unaware of?  RQ6: What implications do the temporal variations in value destruction rates for different categories of capital hold for value creation productivity planning?

4. Value is transient	Value occurs at a moment in time. Only the change in asset worth is enduring	RQ7: What are the implications of temporal variations in moments of value creation/destruction, for different forms of capital, when making net value assessments?
5. Value depends on the rate of use of an asset	Total value created over time depends on frequency, as well as magnitude of each instance	RQ8: Can organisations increase net value through purposeful increases in the rate of use of assets, especially for social and knowledge capital?
Integrated valuation:	The capital-in-use perspective aggregates many value creation and destruction moments over time, for a defined set of assets. Comparative assessment of tangible and non-tangible assets requires a common evaluation platform	RQ9: How can intangible value be best evaluated relative to tangible value, such that auditable net value assessments are possible? RQ10: How may emerging social accounting methods be best employed to encompass social and knowledge capital, as assets of the firm?

### 5.3 Integrated asset valuation

Although conceptually we define value in terms of net changes in the worth of a set of assets, the monetary valuation of assets comprising diverse forms of capital cannot be summed mathematically (Lombardo & Cabiddu, 2017). This position is potentially problematic for managers seeking to evaluate the net value arising from assets used to generate different forms of capital. However, in an era when firms increasingly are being encouraged to measure and account for intangible benefits, such as corporate environmental and social value contributions (Nicholls, 2020), greater attention is being devoted to the valuation of intangible assets. Valuation of intangible assets has long been advocated, where organisations are willing to dedicate the required analytical effort (Anderson & Narus, 1998). Practitioners for instance, are used to enumerating risk, as the product of probability and impact, in either relative terms or as a financial calculation (Office of Government Commerce, 2009). This same approach can be applied to quantify intangibles, such as the social capital in customer loyalty, in terms of probability of future revenue (Jones & Taylor, 2012). The ease with which any form of capital can be valued, depends on how readily and directly it can be converted into financial capital. Certain knowledge capital, including designs and patents, is directly saleable and hence readily valued. Others, such as increments in human capital through training and experience, are unique to each individual, but still may be valued in terms of increases in replacement costs for experienced staff. Social capital in customer relationships can be quantified in terms of probable future revenue, but supplier relationships and individuals' weak-tie social networks are the least tangible asset forms and therefore most difficult to estimate in monetary terms. Even with highly intangible assets, such as weak-tie networks, where variance in estimates will be highest, the process of valuation may still help to increase managers' awareness of the quality and suitability of networks being cultivated. However, not all



purposes require financial quantification. Training, networking strategies, and innovation collaborations can all be assessed relative to alternatives in the same way that alternative financial investments have to be weighted. Although there have been calls for more valuation of intangible assets, there is also recognition that “accounting and finance are not such precise disciplines as might be imagined”, and that in many cases, additional qualitative commentaries on intangible assets in financial reports would provide the information investors need (Persson & Ryals, 2010).

## **6. Conclusions**

### *6.1 Theoretical Contributions*

This study makes three key contributions to the contemporary value literature (Eggert et al., 2019; Eggert et al., 2018; Lindgreen et al., 2012). First, this study develops the notion of value as capital-in-use, which extends and complements extant value literature by offering a new conceptualisation of, and perspective on value (Eggert et al., 2019; Eggert et al., 2018; Gummerus, 2013; Vargo & Lusch, 2004). While a few previous studies have explored how variations in capital can affect value creation, they adopt an actor-centric perspective, in terms of an actor’s access to, and exploitation of capital (Cabiddu et al., 2019; Lombardo & Cabiddu, 2017). This study, in contrast, provides new insights and extends previous notions by considering the implications of a capital-oriented perspective to the nature, characteristics, and dimensions of value more broadly.

Specifically, this study proposes a set of value principles, expressed in terms of change to categories of capital, through which clearer definitions of value, value creation, and value destruction become possible, and provides a new complementary perspective through which the different value logics can be contrasted. The conception of value grounded on capital also improves on earlier conceptual contributions by combining different categories of capital into an orthogonal framework, which enables the value creating properties of value sources to be contrasted over four dimensions. This allows the attributes of all value sources to be contrasted, which previous value frameworks (e.g. Bowman & Ambrosini, 2003) are unable to achieve. The integrated framework enables all direct and indirect value sources (Walter & Ritter, 2003) to be suitably categorised, and included in comprehensive value evaluations.

Second, the value as capital-in-use perspective offers an underpinning logic and a set of principles through which each of the extant value perspectives can be discussed in capital terms, and in combination with the locus, latency, temporal dimensions and convertibility. This adds a complementary, integrated perspective to extant literature, which enables a better comparison between different value examples and conceptualisations in terms of temporal and spatial changes to capital and its worth to different organisational stakeholders (Eggert et al., 2019; Vargo & Lusch, 2016). As well as recognising the incremental benefits arising from use of four categories of capital, there is a parallel recognition of the costs and risk associated with capital not-in-use (latent).

Third, this study provides new insights into the thus far underdeveloped temporal dimension of value (Flint et al., 1997, 2002; Lindgreen et al., 2012; Lyons & Brennan, 2019) by distinguishing

the distinctive temporal properties of each category of capital for their effect on net value, and by highlighting the impact of asynchronicity between the benefit and sacrifice components of the value equation. Particularly the costs associated with maintaining different forms of capital and the risks of their value potential perishing altogether, have important implications for organisational value management, but have been thus far largely neglected in the value literature. The concept of latency is used to highlight that it is assets, not value, that must be considered to be either active or latent, and that assets may spend most of their time in this state.

## *6.2 Practical Implications*

The capital-in-use perspective has implications for the management of any process relating to the creation, utilisation and funding of intangible assets, especially knowledge and social capital with an individual locus. Customer value planning, business networking, innovation projects, supplier collaborations and staff development are all examples of such processes. In these cases, managers face a problem if value assessments mirror corporate reporting standards in the treatment of intangible assets, because investments in certain categories of intangible assets become invisible. The problem arises because financial reporting standards (such as FRS102 in the UK and Ireland) limit recognition of intangible assets to *identifiable* assets, which are separable and therefore saleable, and for which, future revenues can be anticipated and measured (Financial Reporting Council, 2015). Intangible assets with an organisational locus, and those with direct convertibility to financial capital, are the most likely to be considered reportable, whilst intangible assets with an individual locus, such as skills, experience and social capital, are likely to be excluded. Consequently, investments in innovation-collaboration, training, or personal networking can appear to destroy value unless a holistic appraisal is made, of all forms of capital. To address this problem, the proposed value as capital-in-use perspective offers managers a more holistic approach, which ensures that full visibility and management of all forms of capital is maintained.

Viewing value from a capital-in-use perspective offers managers more flexibility with internal asset treatment. For example, business cases can now accommodate more holistic assessments of potential benefits and costs that reflect more realistic capital implications. This is particularly important with investments into assets that may sit idle (latency) or perish over time, and not only carry an opportunity cost, but also destroy value as maintenance costs are incurred and net asset worth depreciates over time. Adopting a capital-in-use perspective enables managers to maintain full asset transparency, plan and track the creation, maintenance and use of intangible assets, and identify subsequent points of conversion into tangible assets. Value-adding steps for all capital forms can be identified; steps which otherwise would remain hidden where value is related only to tangible or identifiable assets. The extent to which managers utilise financial valuations in managing these intangible assets will vary from organisation to organisation, but any evaluation process will increase asset visibility and encourage managers to evaluate intangible capital in terms of its future value creation, and reduce arbitrary or ill-directed investments.

Finally, the capital-in-use perspective encourages managers to differentiate between external assets they access (through loans, rental and contract labour), fully owned assets (such as buildings,

equipment, patents and brand reputation), and tied but unowned (unsaleable) assets (individuals' social capital and knowledge). Managers need to examine the locus of value creation at the boundary of the firm to ensure appropriate value returns for the focal organisation. Use, for instance, of contract or partner labour may be attractive from a financial perspective, but will increase the knowledge, experience and social capital for those resources, all of which, subsequently, will be unavailable to the focal organisation.

### *6.3 Limitations and further research*

While this study develops novel and important insights on the capital-oriented perspective and conceptualisation of value, it has some limitations, which offer avenues for future research. First, this study is conceptual in nature, and a natural avenue for future research would be to test and expand the ideas proposed in this paper empirically. For example, qualitative research designs could be used to examine how suppliers and customers experience, perceive, and assess value from different capital categories (Prior, Keränen, & Koskela, 2019), and when, how, or why differences in value appraisals between exchange partners may emerge (Macdonald et al., 2016). Alternatively, quantitative research designs could be used to examine the relative importance of different capital categories on value perceptions specifically, or performance outcomes more broadly, and identify potential conditional variables that influence these relationships.

Second, the four categories of capital discussed in this paper are prominent and readily identifiable value sources from the extant literature. However, it is likely that other meaningful capital categories exist, and future research could expand this by identifying other capital categories in different empirical contexts. For example, while this paper concentrates on B2B contexts, future studies could explore B2C context, where the affective component of consumer decision making is more prominent (Chipp et al., 2019). Where positive emotional outcomes are recognised as a valid component of value, further development of the capital typology could include emotion, either specifically, or as a component of experience within the human capital sub-category. This could help to unpack the role of emotions in value assessments, which is important yet woefully underexplored issue (Keränen & Jalkala, 2014).

Third, while this paper predicates that viewing value from a capital-in-use perspective has important advantages over other value perspectives, future research could empirically explore and test whether and under what conditions this holds true. For example, future studies could compare the scope and depth of different value perspectives on evaluating both expected and realised value, and uncover where, how, and why different perspectives might differ. This could offer important insights on the usefulness and applicability of different value perspectives in different contexts and situations.

Finally, considering value from a capital-oriented perspective opens up new doors for future research in customer value domain, especially from a temporal perspective, which is long overdue (Flint et al., 1997; Lyons & Brennan, 2019). Specifically, the capital-oriented perspective on value offers new scope to explore, evaluate, and track temporal impacts that stem from value sources that are static, latent, or in-use. This is particularly important when evaluating the commercial and

relational value of long-term relationships, which are at the heart of B2B marketing management (Biggemann & Buttle, 2012; Corsaro & Snehota, 2010). Furthermore, since a capital-oriented perspective on value is able to capture the accumulation and degradation of different forms of capital over time, it offers more holistic tools to understand, interpret, and evaluate value (co)creation and value destruction in organisations, business relationships, value networks, and broader service (eco)systems (c.f. Cabiddu et al., 2019). Considering that the conceptualisation of value as capital-in-use is relatively novel addition to the value literature, we hope that his article will encourage future research to explore its usability and applicability more broadly, and reveal its advantages and disadvantages compared to existing value conceptualisations in B2B and B2C marketing literatures.

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