**A postdigital perspective on organisations**

**Abstract**

This article proposes that a postdigital perspective on organisations offers the potential to push against, or move beyond, the ‘solutionist’ view of digital technologies that is often promoted by technology companies. The author identifies how aspects of postdigital thinking might be used to offer a fresh perspective on the implications of the increasingly digital operations of organisations, and proposes that a postdigital perspective on organisations is a potentially valuable way to mitigate the growing inequality resulting from what has variously been termed ‘digital capitalism’, ‘cybernetic capitalism’, ‘algorithmic capitalism’, and ‘bioinformational capitalism’. By reviewing literature at the intersection of organisational complexity, organisational learning and customer experience, the author argues that the system-level view of organisational activity provided by the customer experience function aligns with the anti-reductionism that is central to postdigital discourse. An under-researched aspect of the customer experience function is its potential to reflect customers’ experiences back into an organisation with the aim of changing established routines, an aim that can be interpreted as organisational learning. The author argues that the work of the customer experience function can inform a postdigital conception of organisations by integrating digitally-mediated representations of customers with embodied, emotional experiences of organisational activity. In doing so, the customer experience function offers the potential to allow for greater human agency in shaping the increasingly digital operations of organisations.

Keywords: organisational complexity, customer experience, postdigital, organisational learning, organisational routines, solutionism

**Introduction**

The concept of postdigital is gaining traction in an increasing range of disciplinary and cross-disciplinary areas, including the arts (Bishop, Gansing, Parikka, & Wilk, 2017; Monoskop, 2018), sciences (Jandrić et al., 2018), architecture (Spiller, 2009), and humanities (Hall, 2013). However, consideration of the term in the area of organisation studies has received significantly less attention. The value of another ‘post-concept’ is questionable in an era when ideas such as post-industrial and postmodernism have failed to surpass their industrial and modernist counterparts (Cox, 2014; Jandrić et al., 2018). With almost twenty years having passed since the dot.com crash, a significant part of the world can now be seen to be grappling with the challenges and opportunities of ‘digital’, a term that itself still invites varying interpretations (Taffel, 2016). As large sections of society strive to make sense of a world which is increasingly permeated by digital and algorithmic technologies, humanity has arguably arrived at a new aesthetic as we struggle to make sense of the ‘seemingly opaque operations of digital infrastructure’ (Berry & Dieter, 2015). This article considers the value of applying a postdigital perspective to the concept of an organisation, which for the purposes of this article is understood as a complex system of individuals who work collectively to ‘produce and sell, for a profit, the goods and services that satisfy society’s needs’ (Pride, Hughes, & Kapoor, 2008: 10).

What is the value of a postdigital perspective on organisations? To respond to this question, it is first necessary to consider the concept of ‘digital capitalism’ (Schiller, 2000), a term which has come to reflect the growing interconnectedness between digital technologies and the dominant capitalist mode of production. In his book *Learning to Save the Future: Rethinking Education and Work in an Era of Digital Capitalism* (2018), Alex Means observes how increasing inequality and receding economic growth have become the normal state of advanced or ‘late capitalism’ (Mandel, 1978). While capitalism has already succeeded in creating vast inequalities between the richest and poorest people and nations (Picketty, 2014) and has been referred to as a form of ‘structural genocide’ (Leech, 2012), digital capitalism risks compounding these inequalities due to the global digital divide (Cruz-Jesus, Oliveira, & Bacao, 2018). As Peter McLaren observes, ‘the digital revolution has encoded dangerous assumptions about endless growth, individualism, and the deepening of the ecological crisis’ (McLaren & Jandrić, 2014:816).

Critiques of capitalism are nothing new, of course, and Means’ book is among the latest in a long line of texts highlighting capitalism’s inherent dichotomy between wealth creation and inequality stretching back to Karl Marx. But a new twist of digital capitalism, driven largely by the global technology companies of Silicon Valley, reveals a growing tendency to pronounce that all the world’s problems can be solved through ‘utopian appeals to market efficiency and technical mastery beyond politics and ideology’ (Means, 2018:2). Such a tendency has been termed ‘solutionism’ (Morozov, 2013), a concept that proposes a progressive approach to social change determined largely by a combination of digital technologies and big data. But at the heart of solutionism lies a contradictory value structure where all technological innovation is valid in order to deliver utopian visions of tomorrow, while nothing can be challenged with regard to the capitalist and political system which perpetuates environmental damage, over consumption and labour inequality in the present (MacLellan, 2013).

By providing a system-level view of organisational activity that promotes a consideration of the impact of an organisation on its wider ecosystem, a postdigital perspective on organisations offers the potential to critique the solutionist tendencies of digital capitalism. Specifically, the author argues that the system-level view of complex organisational activity provided by the customer experience function aligns with the rejection of reductionism that is central to the concept of postdigital. Such a view can inform organisational learning by combining experiences of what happens outside an organisation with knowledge of what happens inside the organisation. It is this emerging role of the customer experience function to use customers’ embodied experiences as a justification for reconfiguring the internal operations of organisations that offers the potential to increase human agency in shaping the increasingly data-driven and algorithmic foundations of organisational activity. The article begins by examining interpretations of postdigital before going on to review literature at the intersection of organisational learning, complexity and customer experience. The potential for the customer experience function to inform a postdigital perspective on organisations is then explored.

**From digital to postdigital**

The debate around the concept of postdigital has highlighted that there are still wide ranging interpretations of ‘digital’ (Taffel, 2016). Cramer (2015) notes that the technical definition of digital does not always refer to something electronic, but rather to something that can be divided into discrete, countable units. This is in apposition to an understanding of analogue, which does not necessarily have to be ‘non-computational or pre-computational (p.17), and which Goodman (1976:160) defines as ‘undifferentiated in the extreme’. As with many concepts, postdigital has been defined in numerous, and often conflicting, ways (Taffel, 2016). In attempting to grapple with postdigital, Cramer (2015) proposes that we should adopt an interpretation of the ‘post’ as comparable to that in post-punk and post-communism, where the post-concept represents an evolution of thinking that is still related to and informed by the original idea. Cramer suggests that the postdigital condition constitutes

‘the state of affairs after the initial upheaval caused by the computerisation and global digital networking of communication, technical infrastructure, markets and geopolitics’ (p.15)

Such a view is less extreme than the often-cited assertion by Negroponte (1998) that the digital revolution is over. The perception that we are over the initial phase of disruption is closer to the suggestion that we are in the second of three ages, that of the ‘mid-digital age’ (Goodwin, 2016), where digital is becoming accepted as the mainstream view of the world for a significant percentage of humanity.

Postdigital has been interpreted as something which aims to reject traditional binaries such as digital/analogue and human/non-human (Jandrić et al., 2018) and as a way of valuing the flaws of digital processes that would previously have been considered as unwanted (Cascone, 2000). Perhaps more pragmatically, Davies (2011) has used the rhetoric of postdigital to argue that a generation of people need to get over themselves and be able to explore what happens when digital technologies are fully integrated into our everyday existence. Drawing on Davies’ (2011) argument, it is possible to consider how a postdigital perspective might reposition what Schumpeter (1934) termed ‘creative destruction’ as business-as-usual. Taffel rightly points out that the idea of postdigital is predicated on accepting immaterialist arguments that digital has previously been something that existed outside of our material existence in places such as ‘cyberspace’ (Dodge & Kitchin, 2000) and ‘virtual communities’ (Rhinegold, 1993, 1995). However, Davies’ view of postdigital has relevance for the vast number of organisations that are rushing to digitalise their operations, as evidenced by growing body of literature examining the digital transformation of business (see, for example, Caudron & Van Peteghem, 2016; Economist Intelligence Unit, 2015; Harvard Business Review, 2015; Matt, Hess, & Benlian, 2015).

But while a pragmatic explanation of postdigital can render the term more practically applicable, its power to reconfigure the very foundations of our existence is articulated by the sociologist Steve Fuller, who proposes that postdigital could also mean ‘after the digital becomes the master narrative of our world’ Fuller and Jandrić (2018: 26). As we move beyond the digitalisation of organisms made possible through the sequencing of genomes, Fuller and Jandrić argue that we are entering a new phase of humanity in which the definition of ‘human’ is no longer solely dependent on having the right genetic makeup. For Fuller, the growing sophistication of algorithms and their use in the development of artificial intelligence means that ‘the very idea that there is something uniquely human about the idea of society is quickly disappearing’ (p.25), and raises the question of radical equality between human and non-human actors. As we witness the historic convergence of the digital and the biological, Peters and Besley (2018) argue that a critical philosophy of the postdigital is required in order to frame and interrogate the forces that are shaping the evolution of humanity and society. The political and financial nature of these forces led to the mid-20th Century conception of ‘cybernetic capitalism’, informed by the work of Weiner (1948) on cybernetics and von Bertalanffy (1950) on general systems theory. But with the advent of the digital era, the increasing reliance of these forces on data and algorithmic technologies has led to their reconceptualisation as ‘algorithmic capitalism’ (Peters, 2017) and ‘bio-informational capitalism’ (Peters & Jandrić, 2019), an ‘emergent form of capitalism that is self-renewing in the sense that it can change and renew the material basis for life and capital as well as program itself’ (p.10). It is partly in response to this theoretical backdrop of emerging forms of capitalism that the current article proposes the need for a conceptualisation of a postdigital organisation.

**What is a postdigital organisation?**

In considering a postdigital perspective on organisations, it is important to consider the extent to which a ‘postdigital organisation’ is achievable. A comparison can be made with Senge (1990) who proposed the conception of the ‘learning organisation’ as a valuable strategic aim, but whose ideas have been proven to be problematic through extensive research (Caldwell, 2012; Grieves, 2008). In the same way that there is a difference between organisational learning as a process and a learning organisation as an idealised end-state (Givel, 2015), a difference exists between a postdigital perspective on organisations as a useful concept for informing action and a ‘postdigital organisation’ as a potentially unrealistic achievement. Before attempting a description of a postdigital organisation, it is first useful to consider different conceptual positions on organisations.

Robichaud and Cooren (2013) present several distinct conceptualisations of organisations, including studies that debate their discursive and non-discursive nature (Alvesson & Kärreman, 2000; Fairclough, 2005) and those which adopt a postmodernist interpretation (Chia, 1996). A substantive contribution to the field has been made by Weick (Weick, 1969, 1977, 1995; Weick & Sutcliffe, 2001) with the argument that organisations are ‘enacted’ into existence through the actions and interactions of agents, who subsequently stabilise the experiences of their interaction through a process of ‘sensemaking’ to establish a collective meaning. A fourth group of scholars propose a view that organisations are constituted by their communication, also known as the ‘communicative constitution of organisation’ or CCO perspective (Fairhurst & Putnam, 2004; Putnam & Nicotera, 2009; Taylor & Van Every, 2000).

The belief that an organisation is continuously emerging through non-linear interaction causes the CCO perspective of organisational communication to overlap with the connectionist perspective of complexity (Cilliers, 1998), which emphasises the connections between agents in a system rather than the attributes of individual agents. Such a shift moves away from the individual and towards the organisation as the unit of analysis, thus aligning the CCO perspective with the literature on organisational complexity. Maguire, McKelvey, Mirabeau, and Ötzas (2006) classify complexity research into two distinct paradigms: objectivist and interpretivist. Common to both paradigms is an acceptance that the unit of analysis in complex systems research is the system itself, or the organisation in the context of organisation studies (Boal & Schultz, 2007; Mitleton-Kelly, 2003; Schneider & Somers, 2006; Stacey, 1995, 1996; Uhl-Bien, Marion, & McKelvey, 2007; Weick, 1995, 2001). A ‘systems thinking’ approach is recognised as an appropriate response to increasing complexity in organisations (Crichton-Sumners, Mansouri, & Sauser, 2013) due to the concept of emergence that is a core property of such systems. Emergence can be understood as the moment at which the system evolves to a new level of complexity to display new, emergent properties that do not exist at lower levels (Merali & Allen, 2011; Mitchell, 2011; Prigogine & Stengers, 1984; Taylor, 2001). From such a perspective, any attempt to reduce explanations to the actions of individual components will ultimately fail to represent the emergent properties of the system, as too much of the relational information will be lost in doing so (Cilliers, 1998; Taylor, 2001).

The anti-reductionist position of organisational complexity can be viewed as aligning with aspects of postdigital, in that both attempt to maintain the complexity of the object under investigation. Viewing an organisation as a complex adaptive system ‘nested’ within a broader ecosystem of comparable systems opens new and valuable perspectives on organisational accountability, as such a view questions the impact of an organisation’s activity on its environment (Cilliers, 2001; Vitale, 2014). Positioning the sustainable emergence of complexity, or ‘conditioned emergence’, as a key strategic driver (MacLean & MacIntosh, 2003) offers a way of realising more equitable and sustainable growth than the hyper-competition of late capitalism by making organisations more considerate of their wider impact on each other and on society (O’Neil, 2017). But if hyperconnectivity is increasing complexity and moving us into an era where people and systems co-evolve (Cham, 2011), and in which an increasing amount of interaction between businesses and customers takes place in a ‘digital service space’ (Ballantyne & Nilsson, 2017), it is important to question the implications of organisations relying on an increasingly digitally-mediated view of their customers (Klaus, P, 2013; McLean & Wilson, 2016; Rose, Hair, & Clark, 2011).

Conversely, one consequence of the increasing digitisation of organisational operations is that customers can expect more personalised interactions as organisations strive to deliver more responsive customer journeys through the increasing use of automation, algorithms, artificial intelligence and predictive analytics (Akter & Wamba, 2016; Copulsky, Richardson, & Simone, 2017). A key driver of the rush for organisations to digitally transform their operations has been the perceived need to provide a ‘single view of the customer’ (Ryals, Knox, & Maklan, 2000; Ryals & Payne, 2001) by joining up the multiple interactions across multiple channels and devices that a customer can have with an organisation. It is here that Cramer’s description of postdigital as ‘the messy state of media, arts and design *after* their digitisation (or, at least, the digitisation of crucial aspects of the channels through which they are communicated)’ (2015: 19) is relevant, as it can be used to hypothesise that postdigital organisations will be in an equally ‘messy state’. In a postdigital organisation, we can assume that the channels through which an organisation communicates with its customers have been digitised, and it is therefore possible to theorise that a postdigital organisation can provide customers with a one-to-one relationship.

A postdigital organisation cannot be understood as ‘divided into discrete, countable units’ (Cramer, 2015:18), whether these units be agents or internal functions. Following Cramer’s logic, a postdigital organisation is one where the organisation itself is viewed as the unit of analysis and understood as a complex adaptive system, a view which aligns with the literature on organisational complexity (Boal & Schultz, 2007; Mitleton-Kelly, 2003; Schneider & Somers, 2006; Stacey, 1995, 1996; Uhl-Bien et al., 2007; Weick, 1995, 2001). One important implication of such a view is that a customer should be able to interact with an organisation as if it were a single entity. For this to be achievable, all the complexity of the organisation would have to be present in each individual agent, something which Cilliers (1998) argues is impossible as it goes against the logic of complex systems. However, one possible way around this problem is to hypothesise that each agent has near-instant access to all the knowledge in the organisation (or at least sufficient knowledge to resolve a customer interaction effectively). This idealised situation is beginning to become possible through the use of large datasets, sophisticated algorithms and artificial intelligence.

**A crisis of representation**

But attempts to conceptualise a postdigital organisation are rendered problematic by the issues of legitimation and representation of knowledge. Questioning what constitutes legitimate knowledge is relevant to a postdigital perspective on organisations because it presents implications for the types of knowledge an organisation values, how knowledge is stored, and how this knowledge affects the decisions that determine the ability of the organisation to sense, explore, adapt, and evolve in response to its environment (March, 1991; Pavlou & El Sawy, 2011). The present focus on organisations digitally transforming many aspects of their operations using big data, artificial intelligence and algorithms (Cheng, Dohrmann, Kerlin, Law, & Ramaswamy, 2018; Fitzgerald, Kruschwitz, Bonnet, & Welch, 2014; Weill & Woerner, 2015) is predicated on the ability of technology to represent knowledge effectively. Lyotard (1984) observed how the status of knowledge is changing in a society increasingly reliant on, and driven by, the affordances of computers. Lyotard observed how the use of scientific rationality and reason as the primary method of making knowledge claims that began during the Enlightenment has come to dominate society, and has become the only accepted way of establishing what constitutes knowledge at all. This has happened at the expense of what he terms ‘narrative’ knowledge, such as the use of storytelling, rituals, music or dance in more primitive or traditional societies, which require no legitimation because ‘they are legitimated by the simple fact that they do what they do’ (1984: 23). Narrative knowledge has been shown to constitute an appropriate epistemological approach to analysing organisations as complex systems due to its ability to provide second-order thinking (Tsoukas & Hatch, 2001).

The drive to digitise can be viewed as aligning with the belief that knowledge can be effectively codified, stored and represented in digital format (Ancori, Bureth, & Cohendet, 2000). But Lyotard argues that representation is nihilistic precisely because it cuts us off from reality, and his belief that ‘what is represented is constantly deferred’ (ibid.) is indicative of the alignment of his philosophy with principles of post-structuralism (Ruitenberg, 2018). From this perspective, an increasing reliance on digital forms of communication in organisations risks leaving employees increasingly reliant on a digitally-mediated view of what is happening outside their organisation. These concerns are reflected in Dreyfus' (2001) observation that the more we communicate using technology, the more our reality is constructed from representations that we see on a screen rather than from our direct experience of events. Noting how Descartes (1958) questioned whether we are ever able to be truly present in the world by highlighting how our sense organs bring information to the brain, Dreyfus observes how pragmatists such as John Dewey believed that a more important question is whether ‘our relation to the world is that of a disembodied detached spectator or an involved embodied agent’ (Dreyfus, 2001: 54). From this perspective, our sense of *being in the world* arises from our ability to control events and obtain perceptual feedback on our actions. The act of communicating involves a subtle combination of eye movements, head motion, gesture, and posture, generating a richness of communication that cannot be achieved by simply adding together the output of individual channels (Canny & Paulos, 2000). This richness has been referred to as ‘intercorporeality’ (Merleau-Ponty, 1979), and if this richness of communication can be understood as enabling meaning to emerge that is greater than the sum of individual channels then intercorporeality can be understood as a proxy for complexity.

As organisations become increasingly concerned with - and reliant on - using digital data to guide their activity, there is a risk regarding their ability to obtain a balanced perspective on their actions. It is this digitally-mediated, algorithmically-driven interpretation of reality that O’Neil (2017) argues presents such a risk to society, with the potential to compound inequality. In order to consider how a postdigital conception of organisations might mitigate this risk, we must now turn our attention to the potential for aspects of organisational learning to inform a more sustainable approach to guiding organisational activity.

**How organisational learning can inform a postdigital conception of organisations**

The validity of organisational learning has been widely debated in the literature (Argote, 2011; Easterby-Smith, 1997; Easterby-Smith, Crossan, & Nicolini, 2000), and subject to criticism regarding concerns of anthropomorphism (Caldwell, 2012). Despite differing views regarding whether organisational learning should be understood as a change in cognition or a change in behaviour, there is general acknowledgement that learning at the organisational level can be evidenced as either a change in beliefs/cognitions or in actions/behaviour (Easterby-Smith et al., 2000), and ‘most researchers would agree with defining organisational learning as a change in the organisation’s knowledge that occurs as a function of experience’ (Argote, 2011: 440).

At the heart of the problem of organisational learning is the issue of how the knowledge of individuals is transferred to the organisation itself (Crossan, Lane, & White, 1999; Kim, 1993). An expansive body of research has investigated how the knowledge and experience of individuals can be embedded in aspects of an organisation through routines (Cepeda & Vera, 2007; Cyert & March, 1963; Nelson & Winter, 1982), shared mental models (D. H. Kim, 1993; Senge, 1990) transactive memory systems (Kuutti & Bannon, 1996; Walsh & Ungson, 1991; Wegner, 1986), and knowledge management systems (S. H. Kim, 2008; Vera, Crossan, & Apaydin, 2011). Bannon & Kuutti (1996) observe that the development of computation through the 20th century has led to a conception of memory that is increasingly equated with the idea of storage and retrieval of information. However, the authors argue that more recent associations of memory with computation and storage have obscured a long-established interpretation of memory as an ‘active act of remembering’ (ibid.: 161). The concept of memory as a constructive act (Bartlett, 1932) originated in ancient Greece and was subsequently developed by cultural historical psychologists as ‘processes that constitute the content of a specific action’ (Zinchenko, 1983: 76). From such a perspective, ‘each action of memorising or storing information and each action of recalling and remembering take place in the context of an activity’ (Bannon & Kuutti, 1996: 162).

The impact of theories of computation on notions of learning and memory throughout the 20th century has led to a conception of knowledge as something that can be digitised for easy storage and retrieval in computer systems (Ancori et al., 2000; Argote, 2005). But such a view risks equating knowledge with data and information, and doing so can not only lead to organisations failing to achieve the expected gains from knowledge management systems (Davenport & Prusak, 1998) but also produce expensive and dangerous mistakes (Sveiby, 1997). While numerous studies have attempted to move conceptions of knowledge away from a commodity that is acquired, and towards an understanding of knowledge-as-practice (Blackler, 1995; Cook & Brown, 1999; Nicolini & Meznar, 1995; Polanyi, 1967), attempts to classify these perspectives are rendered problematic due to the diversity of methods of inquiry (Caldwell, 2012). However, most practice-based theories of knowledge share a common theme in their rejection of a conception of knowledge based on representationalism (Schatzki, 1997). A key issue with the use of digital technology to store and represent knowledge in organisations is the problem of comparing a computer to a human brain. Cilliers (2000) observes that there is a fundamental difference in how each perform this task, and whereas in the former a direct link exists between a symbol and its meaning, in the latter meaning emerges from the interplay between every element of the system.

Following the logic of Merleau-Ponty (1979) and Cilliers (1998), using computers to store the knowledge of an organisation will enable some information to be captured and represented. However, the meaning emerging from directly participating in communication – what Dewey (1963) refers to as being an ‘involved embodied agent’ – cannot be effectively represented in digital form. This problem is precisely that identified by Lyotard (1984), who argues that any attempt to represent reality using semiotics will be unable to capture and reproduce the fullness of an event. Once information is stored and represented as symbols, it is no longer possible to interact with it and receive ‘perceptual feedback on our actions’ (Dreyfus, 2001:54).

A practice-based view of knowledge supports a postdigital perspective on organisational learning because it rejects the view of knowledge as something that can be reduced to digital data and codified, stored and transmitted in digital form. Such a view proposes that knowledge and learning are inseparable from practice (Brown & Duguid, 1991), are understood as processes of participation within communities of learning or practice that take place within ‘shifting practice spaces’ (Caldwell, 2012:149), and include the shared learning and tacit knowing contained in social practices (Bourdieu, 1977; Wenger, 2000). A postdigital perspective on organisational learning is also consistent with the practice-based view that meaning is not fixed, but is instead an intersubjective construct that constantly evolves through social interaction (Derrida, 1984; Vygotsky, 1978). Such a view distinguishes between passively possessing knowledge and actively knowing, and proposes that knowing something is only evidenced through applying knowledge to a given task or situation (Cook & Brown, 1999).

**Achieving a postdigital perspective through the customer experience function**

Having established the value of organisational learning to a postdigital conception of organisations, it is now possible to consider how the work of the customer experience (CX) function can inform such a perspective. CX is a relative newcomer to the organisational landscape, and its value as an ‘academically robust construct’ is still being debated (Palmer, 2010:196). The term ‘customer experience’ has been described as an umbrella construct (Kranzbühler et al., 2017), which can be understood as a ‘broad concept used to encompass and account for a diverse set of phenomena’ (Hirsch & Levin, 1999). Kranzbühler et al. (2017) highlight the difference between a perception of CX as providing an understanding of what happens outside an organisation (an ‘etic’ view) and one which affords a greater understanding of what happens inside (an ‘emic’ view). While CX originated in the idea of service quality and experience as a differentiator (Parasuraman, Zeithaml, & Berry, 1988), it has subsequently been found to differ conceptually from notions of service quality (Klaus & Maklan, 2013). CX is often used interchangeably with ‘customer service’ due to the way in which excellent service can generate a positive emotional response (Oliver, Rust, & Varki, 1997), and with ‘user experience’, as customers’ interactions with businesses are increasingly mediated by technology (Novak, Hoffman, & Yung, 2000; Rose et al., 2011). However, it is the ability of the CX function to reflect the output of an organisation back into the organisation in order to deliver a critical perspective that is the focus of the current article.

As organisations seek new and innovative ways to differentiate themselves from their competitors, increasing attention has been paid to the potential for organisations to learn from their customers (McKinsey, 2016; Verhoef et al., 2009), an activity often defined as the co-creation of value (Rowley, Kupiec-Teahan, & Leeming, 2007) based on service-dominant logic (Vargo & Lusch, 2004, 2008). There is a growing acceptance that delivering an effective customer experience now involves effective coordination and integration of the cross-functional efforts of marketing, service operation, product development, information technology, human resources, and account teams (Meyer & Schwager, 2007). But while the role of the CX function in facilitating a customer-oriented perspective is well-researched, less is known about its potential to transcend the tradition reduction of an organisation into separate functions and deepen integration by modifying and improving organisational routines (Kranzbühler et al., 2017; Zollo & Winter, 1999).

In striving to describe an organisational system as a working whole and evaluate customers’ embodied experience of the total output of organisational activity, the CX function rejects the deconstruction of an organisation into its constituent parts. It is this shift away from the individual as the unit of analysis and towards a focus on how customers experience the collective output of organisational activity which renders the CX function relevant to a discussion of postdigital organisations. A key aspect of internally-focused CX work involves using customers’ experiences to help those inside organisations transcend the digital disruption caused by the growing digital transformation of operations (Bradley & O’Toole, 2016). If an organisation is understood as emerging through the dynamic conversations and interactions between multiple communities of practice (Robichaud, Giroux, & Taylor, 2004; Wenger, 2000), the internally-focused work of the CX function can be viewed as playing an important role at the boundaries of these communities. To use Wenger’s term, CX professionals can be understood as ‘brokers between communities’ (2000:235) who translate the experiences and competences of different organisational communities of practice to achieve ‘new levels of coordination’ (p.234).

While research into CX has predominantly focused on its ability to improve the efficiency with which organisations can satisfy customer needs, the author argues that the growing focus on how customers perceive organisations can create a lever of accountability. This has the potential to address Morozov’s concerns of solutionism by placing human agency above the techno-deterministic view of social change by ensuring that the ultimate decision about ‘what we want’ from organisations is more important that algorithmic regulation (Means, 2018; O’Neil, 2017). The CCO conception of an organisation as something that is continuously evolving through the interactions of its members (Robichaud, Giroux, & Taylor, 2004) aligns with the process philosophy that underpins a critical philosophy of the postdigital (Peters & Besley, 2018). The focus of the CX function on using customer feedback to continuously shape the activity of an organisation is a mechanism through which humans can exert influence over organisational development. If a postdigital organisation is one in which the organisation itself is the unit of analysis, and can provide a ‘one-to-one’ relationship with customers, then it is theoretically possible to subject an organisation to Fuller’s consideration of radical equality (Fuller & Jandrić, 2018). If, as Fuller argues, there is scope for widening the definition of ‘human’ to incorporate algorithms, then it is potentially possible to apply the same criteria to postdigital organisations and subject them to the same expectations as we would humans. While the CX function enables us to ask ‘what experience of an organisation do we want?’, a postdigital perspective on organisations enables a more critical consideration how organisations integrate traditional capitalist drivers with more human considerations such as the impact of organisational activity on employees, society and the environment.

Graeber (2001:1-2) has argued that traditional conceptions of value are no longer sufficient for a society in radical transformation, and proposes a new interpretation of value as ‘the way people who *could* do almost anything…assess the importance of what they do.’ Such a shift in organisational behaviour is already in progress with the growing recognition that customers can play a valuable role in the process of value creation, and that organisations can and should learn from their customers (Vargo & Lusch, 2004, 2008, 2017). But it is possible to go further and argue that the customer experience perspective revalorises the customer as someone with the power to hold organisations accountable. Drawing on Graeber’s definition of value, what has yet to happen is for customers to truly ‘assess the importance of what they do’ and appreciate that their embodied experience of organisational activity is more important than the solutionist assumption that technology alone can solve all problems and satisfy all needs. It is up to us, as customers, to reject the representations that organisations hold of us which are constructed from a myriad of data points, and instead make clearer demands regarding how we want organisations to act. Central to this is the need for us as customers to take a more conscious approach to what we value, and harness the potential of customer experience to provide a postdigital, human-centred approach to organisational evolution that challenges the techno-deterministic view of solutionism.

**Conclusion**

This article has argued that the CX function can inform a postdigital conception of organisations through its ability to integrate digitally-mediated representations of customers with their emotional, embodied experience of organisational activity. Framing an organisation as a complex adaptive system shifts focus away from the individual and towards the organisation as the unit of analysis, and such a shift is consistent with the anti-reductionist rhetoric of postdigital to move beyond a conception of an organisation as something that can be reduced to individual people, resources and data. The customer experience function has the potential to increase human agency in shaping organisational evolution, but this is dependent on a reconceptualisation of value in which customers take a more conscious approach to determining what is important in the activity of organisations. This can be summarised by Peter McLaren’s observation that, ‘all of us participate in this structural genocide [of capitalism] as much by what we choose not to do, as by what actions we choose to take in our everyday lives’ (McLaren & Jandrić, 2014:821).

While it may be too early to describe what a postdigital organisation might look like, a postdigital perspective can provide a useful critical viewpoint for informing the ongoing evolution of organisations. The phrase ‘we stand at a crossroads’ has been used many times in many different circumstances, but its use in the context of postdigital feels appropriate in making us reflect on what we want from organisations, and on our role as customers in shaping them. Further research would aim to identify how far it is possible to move towards the ideal of a postdigital organisation before such a position invalidates the theoretical perspective of complex adaptive systems. Similarly, subsequent research would investigate how a postdigital perspective might be applied to other aspects of organisational activity such as leadership, operations, human resources, and information technology (IT) teams, to identify potential shifts in ways of working that would enable a more sustainable emergence of organisational complexity.

If we wish to avoid the solutionist tendencies of digital articulated by Morozov (2013) and the sinister, algorithmically-driven inequality described by O’Neil (2017) and Peters (2017), we can use the question ‘what experience do we want?’ to push back against the techno-deterministic approach that is characteristic of the increasing use of digital technologies to interpret our needs. Berry (2012) has argued that digital increasingly causes us to place a passive trust in technologies that we barely understand. But a postdigital perspective on organisations enables us to move beyond the worry of not understanding and instead prioritise the experiences that we want organisations to provide, not only for us as customers but also for society and the environment. If we are to push back against Leech’s structural genocide (2012), is up to us as customers to reconsider what we truly value in organisations, and adapt our behaviour accordingly.

**References**

Akter, S., & Wamba, S. F. (2016). Big data analytics in E-commerce: a systematic review and agenda for future research. *Electronic Markets*, *26*(2), 173–194. https://doi.org/10.1007/s12525-016-0219-0

Alvesson, M., & Kärreman, D. (2000). Taking the linguistic turn in organizational research: Challenges, responses and consequences. *Journal of Applied Behavioral Sciences*, *36*, 136–158.

Ancori, B., Bureth, A., & Cohendet, P. (2000). The economics of knowledge: the debate about codification and tacit knowledge. *Industrial and Corporate Change*, *9*(2), 255–287.

Argote, L. (2005). Reflection on two views of managing learning and knowledge in organizations. *Journal of Management Inquiry*, *14*(1), 43–48.

Argote, L. (2011). Organizational learning research: Past, present and future. *Management Learning*, *42*(4), 439–446.

Ballantyne, D., & Nilsson, E. (2017). All that is solid melts into air: the servicescape in digital service space. *Journal of Services Marketing*, *31*(3), 226–235. https://doi.org/10.1108/JSM-03-2016-0115

Bannon, L. J., & Kuutti, K. (1996). Shifting Perspectives on Organizational Memory: From Storage to Active Remembering. In *Proceedings of the 29th Annual Hawaii International Conference on System Sciences*. Hawaii: IEEE.

Bartlett, F. C. (1932). *Remembering*. Cambridge, UK: Cambridge University Press.

Berry, D M. (2012). The Social Epistemologies of Software. *Social Epistemology*, *26*(3–4), 379–398.

Berry, David M, & Dieter, M. (2015). Thinking Postdigital Aesthetics: Art, Computation and Design. In David M Berry & M. Dieter (Eds.), *Postdigital Aesthetics: Art, Computation and Design* (pp. 1–12). Palgrave Macmillan. Retrieved from http://raley.english.ucsb.edu/wp-content/Engl800/postdigital-aesthetics.pdf

Bishop, R., Gansing, K., Parikka, J., & Wilk, E. (Eds.). (2017). *Across and beyond: A transmediale reader on post-digital practices, concepts and institutions*. Berlin: Sternberg Press.

Blackler, F. (1995). Knowledge, knowledge work, and organizations: An overview and interpretation. *Organization Studies*, *16*, 1021–1046.

Boal, K., & Schultz, P. (2007). Storytelling, time, and evolution: The role of strategic leadership in complex adaptive systems. *The Leadership Quarterly*, *18*(4), 411–428.

Bourdieu, P. (1977). *Outline of a Theory of Practice*. Cambridge, UK: Cambridge University Press.

Bradley, C., & O’Toole, C. (2016). *An incumbent’s guide to digital disruption* (McKinsey Quarterly). McKinsey & Company. Retrieved from http://www.mckinsey.com/business-functions/strategy-and-corporate-finance/our-insights/an-incumbents-guide-to-digital-disruption

Brown, J. S., & Duguid, P. (1991). Organizational Learning and Communities-of-Practice: Towards a Unified View of Working, Learning and Innovation. *Organization Science*, *2*(1), 40–57. https://doi.org/10.1287/orsc.2.1.40

Caldwell, R. (2012). Systems Thinking, Organizational Change and Agency: A Practice Theory Critique of Senge’s Learning Organization. *Journal of Change Management*, *12*(2), 145–164.

Canny, J., & Paulos, E. (2000). Tele-Embodiment and Shattered Presence: Reconstructing the Body for Online Interaction. In K. Goldberg (Ed.), *The Robot in the Garden: Telerobotics and Telepistemology in the Age of the Internet* (pp. 280–281). Cambridge, MA: MIT Press.

Cascone, K. (2000). The Aesthetics of Failure: ‘Post-Digital’ Tendencies in Contemporary Computer Music. *Computer Music Journal*, *24*(4), 12–18.

Caudron, J., & Van Peteghem, D. (2016). *Digital transformation: a model to master digital disruption*. Ghent, Belgium: DearMedia.

Cepeda, G., & Vera, D. (2007). Dynamic capabilities and operational capabilities: A knowledge management perspective. *Journal of Business Research*, *60*(5), 426–437. https://doi.org/10.1016/j.jbusres.2007.01.013

Cham, K. (2011). *The Architecture of the Image: From Rhetoric to UXD & Neuromedia*. The London Graduate School, London, UK.

Cheng, W.-L., Dohrmann, T., Kerlin, M., Law, J., & Ramaswamy, S. (2018). Creating an effective workforce system for the new economy. *McKinsey*, 7.

Chia, R. C. (1996). *Organizational analysis as a deconstructive practice*. New York, NY: Walter de Gruyter.

Cilliers, P. (1998). *Complexity and Postmodernism*. London, UK: Routledge.

Cilliers, P. (2001). Boundaries, Hierarchies and Networks in Complex Systems. *International Journal of Innovation Management*, *5*(2), 135–148.

Cook, S. D., & Brown, J. S. (1999). Bridging Epistemologies: The Generative Dance Between Organizational Knowledge and Organizational Knowing. *Organization Science*, *10*(4), 381–400.

Copulsky, J., Richardson, S., & Simone, M. (2017). Marketing technologies, customer data and analytics: Enabling responsive customer journeys and scalable marketing processes. *Applied Marketing Analytics*, *3*(2), 102–111.

Cox, G. (2014). Prehistories of the Post-digital: or, some old problems with post-anything. *A Peer-Reviewed Journal About*, *3*(1). Retrieved from http://post-digital.projects.cavi.au.dk/?p=578

Cramer, F. (2015). What is Post Digital? In M. Berry & M. Dieter (Eds.), *Postdigital Aesthetics: Art, Computation and Design* (pp. 12–28). Basingstoke, UK: Palgrave Macmillan.

Crichton-Sumners, C., Mansouri, M., & Sauser, B. (2013). Systems Thinking for Knowledge Transfer in Organic and Mechanistic Organizations. *Transportation Research Record: Journal of the Transportation Research Board*, *2399*, 112–120. https://doi.org/10.3141/2399-12

Crossan, M., Lane, H. W., & White, R. E. (1999). An Organizational Learning Framework: From Intuition to Institution. *Academy of Management Review*, *24*(3), 522–537.

Cruz-Jesus, F., Oliveira, T., & Bacao, F. (2018). The Global Digital Divide: Evidence and Drivers. *Journal of Global Information Management*, *26*(2), 1–26.

Cyert, R. M., & March, J. G. (1963). *A Behavioural Theory of the Firm*. Englewood Cliffs, N.J: Prentice Hall.

Davenport, T. H., & Prusak, L. (1998). *Working Knowledge: How Organizations Manage What They Know*. Boston, MA: Harvard Business School Press.

Davies, R. (2011, November). again with the post digital [Blog]. Retrieved 20 August 2018, from http://russelldavies.typepad.com/planning/2011/11/i-first-talked-about-post-digital-at-an-event-called-thinking-digital-in-2009-in-gateshead-looking-back-thats-probably-wh.html

Derrida, J. (1984). *Margins of Philosophy*. (A. Bass, Trans.) (Reprint). University of Chicago Press.

Descartes, R. (1958). *Philosophical Writings*. (N. K. Smith, Ed. & Trans.). New York, NY: ModernLibrary.

Dewey, J. (1963). *Experience and Education*. New York, NY: MacMillan Publishing.

Dodge, M., & Kitchin, R. (2000). *Mapping Cyberspace*. New York, NY: Routledge.

Dreyfus, H. L. (2001). *On the Internet*. London, UK: Routledge.

Easterby-Smith, M. (1997). Disciplines of Organizational Learning: Contributions and Critiques. *Human Relations*, *50*(9), 1085–1113.

Easterby-Smith, M., Crossan, M., & Nicolini, D. (2000). Organizational learning: debates past, present and future. *Journal of Management Studies*, *37*(6), 783–796.

Economist Intelligence Unit. (2015). *Digital Evolution: Learning from the Leaders in Digital Transformation* (White Paper). Retrieved from http://digitalevolution.eiu.com/learning-from-the-leaders-in-digital-transformation/exec-summary

Fairclough, N. (2005). Discourse analysis in organization studies: The case for critical realism. *Organization Studies*, *26*(6), 915–939.

Fairhurst, G. T., & Putnam, L. L. (2004). Organizations as discursive constructions. *Communication Theory*, *14*, 5–26.

Fitzgerald, M., Kruschwitz, N., Bonnet, D., & Welch, M. (2014). Embracing Digital Technology: A New Strategic Imperative. *MIT Sloan Management Review*, *55*(2), 1–12.

Fuller, S., & Jandrić, P. (2018). The Postdigital Human: Making the History of the Future. *Postdigital Science and Education*. https://doi.org/10.1007/s42438-018-0003-x

Givel, Y. P. (2015). *What are the right skills? An investigation of an organisation’s journey towards becoming a learning organisation, and the skills that help leaders to create the conditions and structures characteristic of a learning organisation*. University of Leicester, School of Management. Retrieved from https://lra.le.ac.uk/handle/2381/31434

Goodman, N. (1976). *Languages of Art*. Indianapolis/Cambridge: Hackett.

Goodwin, T. (2016, June 30). Are we entering the post-digital age? Retrieved 13 August 2018, from https://www.linkedin.com/pulse/three-ages-digital-tom-goodwin/

Graeber, D. (2001). *Toward an Anthropological Theory of Value*. New York, NY: Palgrave.

Grieves, J. (2008). Why we should abandon the idea of the learning organisation. *The Learning Organization*, *159*(6), 463–473.

Hall, G. (2013). Towards a post-digital humanities: Cultural analytics and the computational turn to data-driven scholarship. *American Literature*, *85*(4), 781–809.

Harvard Business Review. (2015). *The Digital Transformation of Business* (Harvard Business Review Analytic Services). Harvard Business Review Publishing.

Hirsch, P. M., & Levin, D. Z. (1999). Umbrella advocates versus validity police: a life-cycle model. *Organization Science*, *10*, 199–212.

Jandrić, P., Knox, J., Besley, T., Ryberg, T., Suoranta, J., & Hayes, S. (2018). Postdigital science and education. *Educational Philosophy and Theory*, *50*(10), 893–899.

Kim, D. H. (1993). The Link between Individual and Organizational Learning. *Sloan Management Review*, (Fall), 37–50.

Kim, S. H. (2008). *An empirical assessment of knowledge management systems* (Unpublished Doctoral Dissertation). Carnegie Mellon University, Pittsburgh.

Klaus, P. (2013). The case of amazon.com: towards a conceptual framework of online customer service experience (OCSE) using the emerging consensus technique (ECT). *Journal of Services Marketing*, *47*(6), 433–457.

Klaus, P., & Maklan, S. (2013). Towards a better measurement of customer experience. *International Journal of Market Research*, *55*(2), 227–246.

Kranzbühler, A.-M., Kleijnen, M., Morgan, R., & Teerling, M. (2017). The Multilevel Nature of Customer Experience Research: An Integrative Review and Research Agenda. *International Journal of Management Reviews*, (Special Issue), 1–24.

Kuutti, K., & Bannon, L. J. (1996). Remembering past, present and future - articulating dimensions of ‘organizational memory’ for organizational learning. *Newsletter ACM SIGOIS Bulleting*, *17*(3), 33–37.

Leech, G. (2012). *Capitalism: a structural genocide*. London, UK: Zed Books.

Lyotard, J.-F. (1984). *The Postmodern Condition*. Manchester: Manchester University Press.

MacLean, D., & MacIntosh, R. (2003). Complex Adaptive Social Systems: Towards a Theory for Practice. In E. Mitleton-Kelly (Ed.), *Complex Systems and Evolutionary Perspectives on Organisations: The Application of Complexity Toehry to Organisations* (pp. 149–166). London, UK: Pergamon.

MacLellan, M. (2013). Capitalism’s Many Futures: A Brief History of Theorizing Post-Capitalism Technologically. *Mediations*, *26*(1–2), 159–180.

Maguire, S., McKelvey, B., Mirabeau, L., & Ötzas, N. (2006). Complexity science and organization studies. In S. Clegg, C. Hardy, T. Lawrence, & W. Nord (Eds.), *The SAGE Handbook of Organization Studies* (2nd Edition, pp. 165–214). London: Sage.

Mandel, E. (1978). *Late Capitalism*. New York, NY: Verso.

March, J. G. (1991). Exploration and Exploitation in Organizational Learning. *Organization Science*, *2*(1), 71–87.

Matt, C., Hess, T., & Benlian, A. (2015). Digital Transformation Strategies. *Business & Information Systems Engineering*, *57*(5), 339–343.

McKinsey. (2016). The CEO guide to customer experience | McKinsey & Company. *McKinsey Quarterly*, (August). Retrieved from http://www.mckinsey.com/business-functions/operations/our-insights/the-ceo-guide-to-customer-experience

McLaren, P., & Jandrić, P. (2014). Critical revolutionary pedagogy is made by walking: In a world where many worlds coexist. *Policy Futures in Education*, *12*(6), 805–831.

McLean, G., & Wilson, A. (2016). Evolving the online customer experience...is there a role for online customer support? *Computers in Human Behavior*, *60*(July 2016), 602–610.

Means, A. J. (2018). Solutionism: cancelling the future. In *Learning to Save the Future: Rethinking Education and Work in an Era of Digital Capitalism* (pp. 1–16). New York, NY: Routledge.

Merali, Y., & Allen, P. (2011). Complexity and Systems Thinking. In P. Allen, S. Maguire, & B. McKelvey (Eds.), *The SAGE Handbook of Complexity and Management* (pp. 31–52). London, UK: SAGE.

Merleau-Ponty, M. (1979). *Phenomenology of Perception*. (C. Smith, Trans.). London, UK: Routledge & Kegan Page.

Meyer, C., & Schwager, A. (2007). Understanding Customer Experience. *Harvard Business Review*, (February 2007), 1–12.

Mitchell, M. (2011). *Complexity: A Guided Tour*. New York, NY: Oxford University Press.

Mitleton-Kelly, E. (Ed.). (2003). *Complex Systems and Evolutionary Perspectives on Organisations: The Application of Complexity Theory to Organisations*. London, UK: Pergamon.

Monoskop. (2018). Post-digital aesthetics. Retrieved 20 August 2018, from https://monoskop.org/Post-digital\_aesthetics

Morozov, E. (2013). *To save everything click here: Technology, solutionism and the urge to fix problems that don’t exist*. London, UK: Penguin.

Negroponte, N. (1998, January 12). Beyond digital. Retrieved 13 August 2018, from https://www.wired.com/1998/12/negroponte-55/

Nelson, R. R., & Winter, S. G. (1982). *An Evolutionary Theory of Economic Change*. Cambridge, MA: Harvard University Press.

Nicolini, D., & Meznar, M. (1995). The social construction of organisational learning: Conceptual and practical issues in the field. *Human Relations*, *48*, 727–740.

Novak, T., Hoffman, D., & Yung, Y.-F. (2000). Measuring the Customer Experience in Online Environments: A Structural Modelling Approach. *Marketing Science*, *19*(1), 22–42.

Oliver, R. L., Rust, R. T., & Varki, S. (1997). Customer delight: foundations, findings and managerial insight. *Journal of Retailing*, *73*(3), 311–336.

O’Neil, C. (2017). *Weapons of Math Destruction: How Big Data Increases Inequality and Threatens Democracy*. Penguin.

Palmer, A. (2010). Customer experience management: a critical review of an emerging idea. *Journal of Services Marketing*, *24*(3), 196–208. https://doi.org/10.1108/08876041011040604

Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1988). SERVQUAL - A Multiple-Item Scale for measuring Consumer Perceptions of Service Quality. *Journal of Retailing*, *64*(1), 12–40.

Pavlou, P. A., & El Sawy, O. A. (2011). Understanding the elusive black box of dynamic capabilities. *Decision Sciences*, *42*(1), 239–273.

Peters, M. A. (2017). Algorithmic capitalism in the age of digital reason. *Fast Capitalism*, *14*(1).

Peters, M. A., & Besley, T. (2018). Critical Philosophy of the Postdigital. *Postdigital Science and Education*. https://doi.org/10.1007/s42438-018-0004-9

Peters, M. A., & Jandrić, P. (2019). Posthumanism, openn ontoloiges and bio-digital becoming. In K. Otrel-Cass (Ed.), *Utopia of the digital cornucopia*. Singapore: Springer.

Picketty, T. (2014). *Capital in the Twenty-First Century*. Cambridge, MA: Harvard University Press.

Polanyi, M. (1967). *The Tacit Dimension*. London, UK: Routledge.

Pride, W. M., Hughes, R. J., & Kapoor, J. R. (2008). *Business*. USA: Cengage Learning.

Prigogine, I., & Stengers, I. (1984). *Order Out of Chaos: Man’s New Dialogue with Nature*. New York, NY: Bantam.

Putnam, L. L., & Nicotera, A. M. (Eds.). (2009). *Building theories of organization: The constitutive role of communication*. New York, NY: Routledge.

Rhinegold, H. (1993). *The Virtual Community: Homesteading on the Electronic Frontier*. Reading: Addison-Wesley.

Rhinegold, H. (1995). *The Virtual Community: Finding Connection in a Computerized WOrld*. London, UK: Minerva.

Robichaud, D., & Cooren, F. (Eds.). (2013). *Organization and organizing: Materiality, agency, and discourse*. New York, NY: Routledge.

Robichaud, D., Giroux, H., & Taylor, J. R. (2004). The metaconversation: The recursive property of language as a key to organizing. *Academy of Management Review*, *29*(4), 617–634.

Rose, S., Hair, N., & Clark, M. (2011). Online Customer Experience: A Review of the Business-to-Consumer Online Purchase Context. *International Journal of Management Reviews*, *13*, 24–39.

Rowley, J., Kupiec-Teahan, B., & Leeming, E. (2007). Customer community and co-creation: a case study. *Marketing Intelligence and Planning*, *25*(2), 136–146.

Ruitenberg, C. W. (2018). Postmodernism and Poststructuralism. In P. Smeyers (Ed.), *International Handbook of Philosophy of Education* (pp. 689–702). Springer, Cham.

Ryals, L., Knox, S., & Maklan, S. (2000). *Customer relationship management (CRM): building the business case.* London, UK: FT Prentice Hall.

Ryals, L., & Payne, A. (2001). Customer relationship management in financial services: towards information-enabled relationship marketing. *Journal of Strategic Marketing*, *9*, 3–27.

Schatzki, T. R. (1997). Practices and actions: A Wittgensteinian critique of Bourdieu and Giddens. *Philosophy of the Social Sciences*, *27*(3), 283–308.

Schiller, D. (2000). *Digital Capitalism: Networking the Global Market System*. Cambridge, MA: The MIT Press.

Schneider, M., & Somers, M. (2006). Organizations as complex adaptive systems: Implications of Complexity Theory for leadership research. *The Leadership Quarterly*, *17*(4), 351–365.

Schumpeter, J. (1934). *The Theory of Economic Development*. Cambridge, MA: Harvard University Press.

Senge, P. M. (1990). *The Fifth Discipline: The art and practice of the learning organisation*. New York, NY: Doubleday.

Spiller, N. (2009). Plectic architecture: Towards a theory of teh post-digital in architecture. *Technoetic Arts: A Journal of Speculative Research*, *7*(2), 95–104.

Stacey, R. D. (1995). The science of complexity: an alternative perspective for strategic change processes. *Strategic Management Journal*, *16*(6), 477–495.

Stacey, R. D. (1996). *Complexity and Creativity in Organisations*. San Francisco, CA: Berrett-Koehler.

Sveiby, K. E. (1997). *The New Organizational Wealth: Managing and Measuring Knowledge-Based Assets*. San Francisco, CA: Berrett-Koehler.

Taffel, S. (2016). Perspectives on the postdigital: Beyond rhetorics of progress and novelty. *Convergence: The International Journal of Research into New Media Technologies*, *22*(3), 324–338. https://doi.org/10.1177/1354856514567827

Taylor, J. R., & Van Every, E. J. (2000). *The emergent organization: Communication as its site and surface*. Mahwah, NJ: Eribaum.

Taylor, M. C. (2001). *The Moment of Complexity: Emerging Network Culture*. London: University of Chicago Press.

Tsoukas, H., & Hatch, M. J. (2001). Complex thinking, complex practice: The case for a narrative approach to organizational complexity. *Human Relations*, *54*(8), 979–1013.

Uhl-Bien, M., Marion, R., & McKelvey, B. (2007). Complexity Leadership Theory: Shifting leadership from the industrial age to the knowledge era. *The Leadership Quarterly*, *18*(4), 298–318.

Vargo, S. L., & Lusch, R. F. (2004). Evolving to a new dominant logic for marketing. *Journal of Marketing*, *68*(January), 1–17.

Vargo, S. L., & Lusch, R. F. (2008). Service-dominant logic: continuing the evolution. *Journal of the Academy of Marketing Science*, *36*(1), 1–10. https://doi.org/10.1007/s11747-007-0069-6

Vargo, S. L., & Lusch, R. F. (2017). Service-dominant logic 2025. *International Journal of Research in Marketing*, *34*(1), 46–67. https://doi.org/10.1016/j.ijresmar.2016.11.001

Vera, D., Crossan, M., & Apaydin, M. (2011). A framework for integrating organizational learning, knowledge, capabilities, and absorptive capacity. *Handbook of Organizational Learning and Knowledge Management*, *2*, 153–180.

Verhoef, P. C., Lemon, K. N., Parasuraman, A., Roggeveen, A., Tsiros, M., & Schlesinger, L. A. (2009). Customer Experience Creation: Determinants, Dynamics and Management Strategies. *Journal of Retailing*, *85*(1), 31–41. https://doi.org/10.1016/j.jretai.2008.11.001

Vitale, C. (2014). *Networkologies: A Philosophy of Networks for a Hyperconnected Age - A Manifesto*. Arlesford, UK: Zero Books.

von Bertalanffy, L. (1950). An outline of general system theory. *British Journal for the Philosophy of Science*, *1*(2), 134–165.

Vygotsky, L. (1978). *Mind in Society: The Development of Higher Psychological Processes*. Harvard University Press.

Walsh, J. P., & Ungson, G. R. (1991). Organizational Memory. *Academy of Management Review*, *16*(1), 57–91.

Wegner, D. M. (1986). Transactive memory: A contemporary analysis of the group mind. In B. Mullen & G. R. Goethals (Eds.), *Theories of Group Behavior* (pp. 185–208). New York, NY: Springer-Verlag.

Weick, K. E. (1969). *The social psychology of organizing*. Reading, MA: Addison-Wesley.

Weick, K. E. (1977). Enactment processes in organizations. In B. M. Staw & G. R. Salancik (Eds.), *New directions in organizational behaviour* (pp. 267–300). Chicago, IL: St. Clair Press.

Weick, K. E. (1995). *Sensemaking in Organizations*. Sage.

Weick, K. E. (2001). *Making Sense of the Organization*. Oxford, UK: Blackwell.

Weick, K. E., & Sutcliffe, K. M. (2001). *Managing the Unexpected: Assuring High Performance in an Age of Complexity*. Jossey-Bass.

Weill, P., & Woerner, S. L. (2015). Thriving in an increasingly digital ecosystem. *MIT Sloan Management Review*, *56*(4), 27.

Weiner, N. (1948). *Cybernetics; Or, Control and Communication in the Animal and the Machine*. New York, NY: John Wiley & Sons.

Wenger, E. (2000). Communities of practice and social learning systems. *Organization*, *7*(2), 225–246.

Zinchenko, P. I. (1983). The Problem of Involuntary Memory (originally published in Russian in 1939). *Soviet Psychology*, *22*(2), 55–111.

Zollo, M., & Winter, S. G. (1999). *From Organizational Routines to Dynamic Capabilities* (No. WP 99-07). The Wharton School: University of Pennsylvania.