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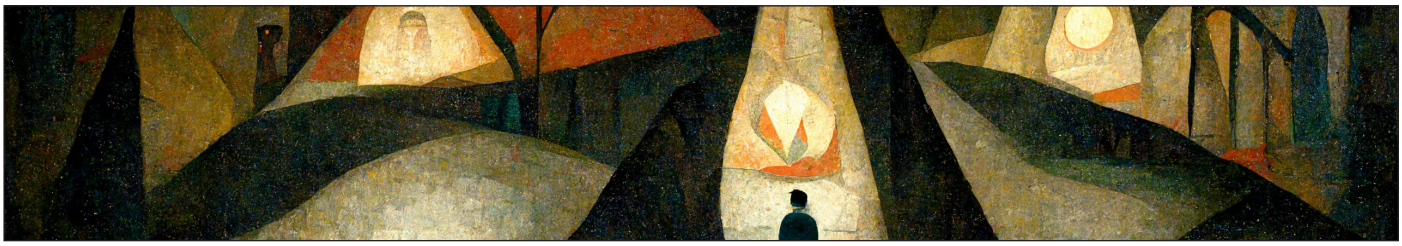

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Exposing the uncomfortable: Activity theory and the limitations of the academic in the world of TEL and programme development

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Abstract

This paper comments on research undertaken as part of a Doctoral programme, recounting the experience of using activity theory and the Activity Systems Model (ASM) to frame and direct a study into the development and delivery of blended learning courses in three higher education institutes in Ireland. It discusses the initial attraction of activity theory as a mechanism to frame what was a study into the impact of digital technology on an aspect of organisational behaviour in higher education. The paper also discusses how some of the contested areas of activity theory and its complexity affected the study. The value of the pursuit of contradictions through the ASM is specifically highlighted in identifying areas of potential problems in the activity of incorporating digital technology into blended learning course development.

1. Introduction

Seduced by apparent simplicity and clarity, activity theory, or more specifically Engeström's Activity Systems Model (ASM), was enthusiastically embraced for a 2017 study to explore the challenges of managing the development and delivery of blended learning courses in three higher education institutes (HEIs) in Ireland. The

study, which explored three different approaches within the context of a clash of collegial and managerial management cultures, emerged only after the initial enthusiasm for ASM was tempered by the complexity and contestations embedded in activity theory.

ASM attractively emerged from a group of potential frameworks for the study, primarily, because the multiple elements of the system appeared to allow for a more complete representation of the phenomenon being studied than other frameworks under consideration, while also offering a vocabulary to describe it. Activity theory's willingness to embrace the messy human side of change, its practical application and the apparent link between activity theory and pragmatism were also attractions. At the heart of activity is this distinction between individual actions and collective activity, and the ASM defines a series of contradictions that, ultimately, emerge from this action/activity distinction. Overall, it was this distinction, and the emerging contradictions, that proved to be a very powerful mechanism to examine the changing role of the academic with the introduction of digital technology through the development and delivery of blended learning programmes.

Getting to the heart of that distinction and applying the contradictions proved challenging. The contentions around activity theory—confusion over the subject and object elements within the ASM and the definition and use of the contradictions as well as the apparent lack of cultural context considerations—added to the challenges. With the assistance of some practitioners, these challenges were worked through and activity theory and the ASM proved able facilitators of an investigation into how HEIs are devising different approaches to the impact of digital technology through blended learning course development and delivery, and what that impact means for the individual academic.

2. Before activity theory

The PhD study sought to investigate how blended learning programmes were being developed and delivered in Irish HEIs within the context of managerialism and collegiality in HE. Working in HE for over 20 years had provided a ringside view of what appeared to be a clash between two cultures, collegiality and managerialism, in HE. Collegial HEIs are seen as decentralised organisations, where decisions are made collectively by academics (Tight, 2014), academic freedom is prioritised (Sahlin, 2012) and the idea that activities or cultures are managed would be "heretical" (Deem, 1998, p. 47). On the other hand, managerialism emphasises centralised operations that promote efficiency and effectiveness and looks to individual managers for decisions (Tight, 2014). Although Lynch, Grummell and Devine (2012) argue a historical basis for managerialism in Ireland, dating back to a 1965 OECD influenced Investment in Education report, O'Connor and White (2011) claim that the university system in Ireland is still in transition from collegiality to managerialism. From personal experience of supporting a HEI start to develop and deliver blended learning programmes, it appeared that introducing online learning, with all the technology that requires, brought a focus on this clash of cultures. A collegial approach ran the risk of academics making collective decisions with little or no awareness of the technical, financial, operational or policy implications of blending a programme. While a managerial approach ran quite contrary to the traditional way programme development and delivery occurred. Blended learning programme development and delivery appeared to be being pulled in opposite directions as an effort was made to define how these processes should work. This study required a framework that encompassed all aspects and actors in a not-yet defined process, where roles and responsibilities were contested, and the target was constantly moving.

Prior to coming to activity theory, models of change management, design based research and action research were considered as frameworks to guide the study. Each of these methodologies was rejected for practical reasons that help to illustrate the attractiveness of using the ASM. Change management theories were rejected because this study did not seek to explain or predict change but rather get behind existing processes and explain how, and in response to what, they had emerged. Design-based research, which can be used to explain and extend knowledge about evolving learning environments (The Design-Based Research Collective, 2003), was ultimately rejected as a framework because it requires there to be a design to be tested and implemented rather than get behind existing systems. As for Action Research, it is a framework to drive change rather than describe and explain why and how change is occurring, if at all. What that left was a need for a framework that could be used to describe and compare different approaches to programme development and delivery using a common language, while also facilitating an investigation as to what these approaches said about the clash of cultures in HE.

3. The attraction

The initial attraction of activity theory was Engeström's (2015) ASM, as it appeared to offer the language and the means to describe an existing system with all its internal tensions. As other authors in this special issue describe, activity

theory has its benefits as a methodology, but for this study, the ASM, with its multiple elements, really frames for the researcher an activity and facilitates a discussion about that activity to the point where it can be reliably compared to other occurrences of the same type of activity. With the ASM, the researcher has to consider the tools, the community, the division of labour and the rules of what was happening, as well as the motive or purpose of the activity and who was the person driving toward that purpose (Table 1).

Table 1. Elements of the ASM defined (Engeström, 2015)

Element	Definition
Subject	People (or groups of people) who have a defined purpose. The person or people from whose perspective the activity is being viewed.
Object	An understanding shared by the subject of what that purpose of the activity is. The object refers to both the motivation of the activity and a material object, what is produced by the activity.
Activity	Actions and processes carried out by the subject to achieve the object.
Community	The wider social group which shares the common aim of achieving the object but does not necessarily carry out the actions and operations of the activity.
Artefact	Also known as tools, artefacts are any physical or psychological instrument that impacts on the relationship between the subject and the object. Artefacts can have both an expanding and limiting effect.
Division of Labour	How the actions and operations that constitute the activity are distributed and the nature of the power relationship associated with that distribution.
Rules	Either explicit or implicit, rules refer to the restrictions within which an activity takes place.

The further attraction of activity theory is that it defined activity, which is what occurs when the subject works to achieve an object, as a unit of analysis (Kuutti, 1995; Shanahan, 2010), and the ASM appeared to actualise that unit of analysis with an easy to understand model to describe and define the activity. If the ASM did nothing more than demand answers to the questions of who is the subject, what is the purpose, who is impacted and what tools are being used, then it was offering more than sufficient direction to begin an investigation.

3.1 The human aspect

An additional positive aspect of activity theory is that it is quite open about acknowledging the human element of an activity. Kuutti (1995) defined activity theory as a cross-disciplinary framework for studying human practices, with Shanahan (2010) claiming it takes a holistic approach to describing human activity within its contexts. Processes are messy human activities, even at their most defined and controlled. The ASM appears to embrace this human aspect to activity and be prepared to explore it, contrasting with the manner in which other process-type frameworks sought to minimise and marginalise it.

3.2 Alignment with pragmatism

Activity theory's apparent link to pragmatism was another plus. A pragmatic view, where the value of the object is wholly conceived through our conception of its practical effects (Pierce, 1878), had come to dominate thinking behind this study. Miettinen (2006) notes that pragmatism and Cultural Historical Activity Theory (CHAT) "recognize the primacy of the idea of practical activity and the changing nature of reality" (p. 4) and that both are committed to changing the world practically (Miettinen, 2006). There appeared to be an alignment, if not a direct connection, between activity theory and pragmatism. This alignment was not a factor in driving the choice to adopt activity theory and the ASM as a framework, but rather helped to confirm the decision.

3.3 Practical application

Another benefit of utilising the ASM is that it provides practical tools to analyse the activity in question. The elements of the ASM are a comprehensive set of terms that provide a vocabulary to define and describe an activity. It was difficult in the course of the study to find an aspect of an activity that was not addressed by one or more of the elements. The elements can be used as predefined codes for data analysis (McNicholl & Blake, 2013) or they are a

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sounding board against which to compare the themes that have emerged from an analysis (Oliver, 2012). What was really useful, however, was the discovery that Mwanza (2001) operationalized ASM into a model, Activity-Oriented Design Method (AODM) to guide both the collection and the analysis of data. The AODM is a toolkit with an eight-step model, an activity notation, a technique of generating research questions and a technique of mapping operational processes. For the purposes of this study, the AODM was used primarily for defining the structured questions in the semi-structured interviews conducted and for identifying the essential elements of an activity and for examining their interrelationships, two crucially practical aspects of the study.

3.4 Collective activity vs. individual action

The distinction between an action and activity made by Alexi Leontiev (1978), referred to as the basis of activity theory (Blunden, 2010), was also an attractive feature. Lev Vygotsky had argued that humans rarely interact with culture and society directly but rather that the interaction is mediated by any number of artefacts (Kaptelinin & Nardi, 2006). Vygotsky had proposed an individual action mediated by a tool as a unit of psychological analysis. Leontiev, however, questioned the value of the action as a unit of analysis by suggesting that, without consideration of the overall collective activity, the individual action seemed 'senseless and unjustified' (Leontiev, cited in Blunden, 2010). Leontiev was suggesting that "all human activity is co-operative from the very beginning" (Blunden, 2010, p. 200). If the action is insufficient to be a unit of analysis, can the collective activity be seen as a unit of analysis? Engeström (1987) notes that activities are distinguished from one another on the basis of the object, the purpose of the activity, and that, with the concept of the division of labour, individuals are not necessarily aware of the objects and motives of the activity. This idea that we may speak of the activity of the individual, but never of individual activity; only actions are individual, resonated with the experience of supporting blended learning programmes.

The development and delivery of programmes may always have been a collective activity for academics, but these processes appeared to be becoming more of a collective multi-skilled activity with the introduction of digital technology to allow for blended delivery. Collegiality, however, affords academics the opportunity to work independently of one another (Trowler, 2010) and of other HEI staff. The contrast between an individual action and a collective activity appeared to be an appropriate way to view the contrast between the individual behaviour of a collegial academic and the collective multi-skilled demands of the development of a blended learning programme that incorporates digital technology. As Engeström notes "The total activity seems to control the individual, instead of the individual controlling the activity" (Engeström, 1987, p. 200).

3.5 The value of contradictions

From an organisational behaviour viewpoint, the real value of the ASM is its emphasis on identifying contradictions, which have been portrayed as drivers of development, change and creating new knowledge (Blackler, 1995). Applying the ASM requires the researcher to seek out these contradictions, but it also provides the mechanism with which to find them. The concept of contradictions within an activity emerges from the distinction between an individual action and the collection of actions that form an activity. Engeström (2015) identified a "clash between individual actions and the total activity system" (Engeström, 2015, p. 66). The theoretical basis for this clash lies in Marx's (Marx, 1910 cited in Engeström, 2015) discussion of exchange value (the market value) and use value (the usefulness), with the essential contradiction occurring between the "mutual exclusion and simultaneous mutual dependency of use value and exchange value in each commodity" (Engeström, 2015). It would appear that the fundamental contradiction in activity in pursuit of an outcome, a commodity, is the conflict that emerges because the activity is trying to simultaneously satisfy the need for exchange value and for use value as they pull in opposite directions. These pinch points, where exchange value and use value are in conflict, are the primary contradictions. Efforts to resolve these contradictions lead to, as Blackler (1995) said, development, change and new knowledge.

Engeström (2015) suggested that four types of contradictions can be found in the ASM: those that occur within the elements of the ASM (primary), between the elements (secondary) of the ASM, between the object of the central activity and the object of a culturally more advanced form of the activity (tertiary) and between neighbouring activities (quaternary). Virkkunen and Newnham (cited in Bligh & Flood, 2015) suggest that contradictions are progressive: primary contradictions between use value and exchange value occur within elements of the activity system, and compensating for primary contradictions leads to contradictions between elements (secondary contradictions). Taking steps to address secondary contradictions leads to the development of a new activity, which leads to tertiary contradictions, that is contradictions between the older and newer versions of the activity. Finally, compensating for tertiary contradictions leads to contradictions between the newer

activity system and neighbouring activity systems (Bligh & Flood, 2015). With the schema of progressive contradictions, the ASM is gifting the researcher a pathway to plot all the subsequent change brought about by addressing the primary contradiction.

Engeström (2015) highlights four types of neighbouring activities: object activities, where the object and outcome of the central activity are embedded in the neighbouring activity; instrument activities, where the neighbouring activity produces an object that becomes a key instrument for the central activity; subject-producing activities; where the neighbouring activity produces, informs or develops the subject of the central activity and rule producing activities, where the neighbouring activity produces rules for the central activity. Having to pursue the contradictions with the four types of neighbouring activities ensures the researcher becomes aware of how the new activity fits into its new reality and context. In terms of a comprehensive view of the activity in question, the ASM and its seven elements gives the researcher the vocabulary to define and describe the activity. The ASM then takes the analysis to another level by challenging the researcher to identify the four types of contradictions, which are progressive in nature, and include the relationship between the new activity and neighbouring activities.

With this study, the primary contradiction that appeared to emerge was that, as blended learning development and delivery was increasingly being mediated by digital technology, the use value of the academic was reducing while the market value of the academic remained unchanged or increased. Previously, in exchange for a salary, the HEI availed of the usefulness of an academic, or group of academics, to develop and deliver a programme. Developing and delivering blended learning programmes requires additional skills, which academics may or may not be in a position to provide; additional workload in preparing online content to a sufficiently high quality; online platforms, learning management systems and live online delivery tools, which required technical support and redefined policies and procedures and ways of thinking about programme delivery that academics unfamiliar with digital technology may not be in a position to fulfil. Previously, all that was required to deliver a programme was a room and an academic with a sufficient level of subject matter expertise, but blended learning requires a multi-skilled team of people. All this additional input diluted the usefulness of the academic, while the exchange value of the academic remained the same or increased.

The case studies examined for the study turned out to offer three very different approaches to reacting to this primary contradiction. The ASM was used to trace the contradictions from which it was possible to identify the advantages and problems of each of the three different approaches. Being able to trace the contradictions between the different blended learning activity systems right through to the contradictions with neighbouring activities facilitated the identification of the problems with each distinct approach. What emerged was a preparatory guide for the sector; should you adopt this approach, then beware of X. Similarly, adopting another approach could lead to Y issues. Ultimately, using the ASM enabled the study to define and describe the activity systems in a way that HEIs would recognise the approach it was adopting and then compensate for the identified problems with that approach.

For example, HEI B (Figure 1) attempted to resolve the primary contradiction by establishing a special unit within the HEI that adopted a managerial approach (Murphy, 2019) to blended learning course development and delivery. In the unit, the academic's role was more on a par with the administrators, instructional designers and technicians. New work processes and policies were devised for this unit, which were centrally managed with decision making resting with a non-academic. In establishing this approach to adapt to the primary contradiction, secondary contradictions emerged.

The secondary contradictions were identified between the rules, the cultural norms of the organisation and the subject and between the rules and the artefacts used to manage the development and delivery of blended learning (Figure 2). In adapting to the secondary contradictions, tertiary contradictions emerged between the object of the collegial way of managing programme development and the object of this new managerial way of managing programme development. The quaternary contradiction that ultimately emerged with a neighbouring activity manifested in the existence of two separate parallel activity systems, each delivering programmes, each with distinct and different work processes, policies, tools and participants. Essentially these were two separate, neighbouring HEIs. This one example of how a HEI had adapted to the primary contradiction of reduced usefulness of the academic was very different from the other two cases studied and, therefore, had very different advantages and disadvantages that were highlighted by the identification of the secondary, tertiary and quaternary contradictions in the activity system.

The link between pragmatism and activity theory, together with the idea that activity theory offered the vocabulary to frame the exploration and put the human element of

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Figure 1. HEI B's ASM (Murphy, 2018)

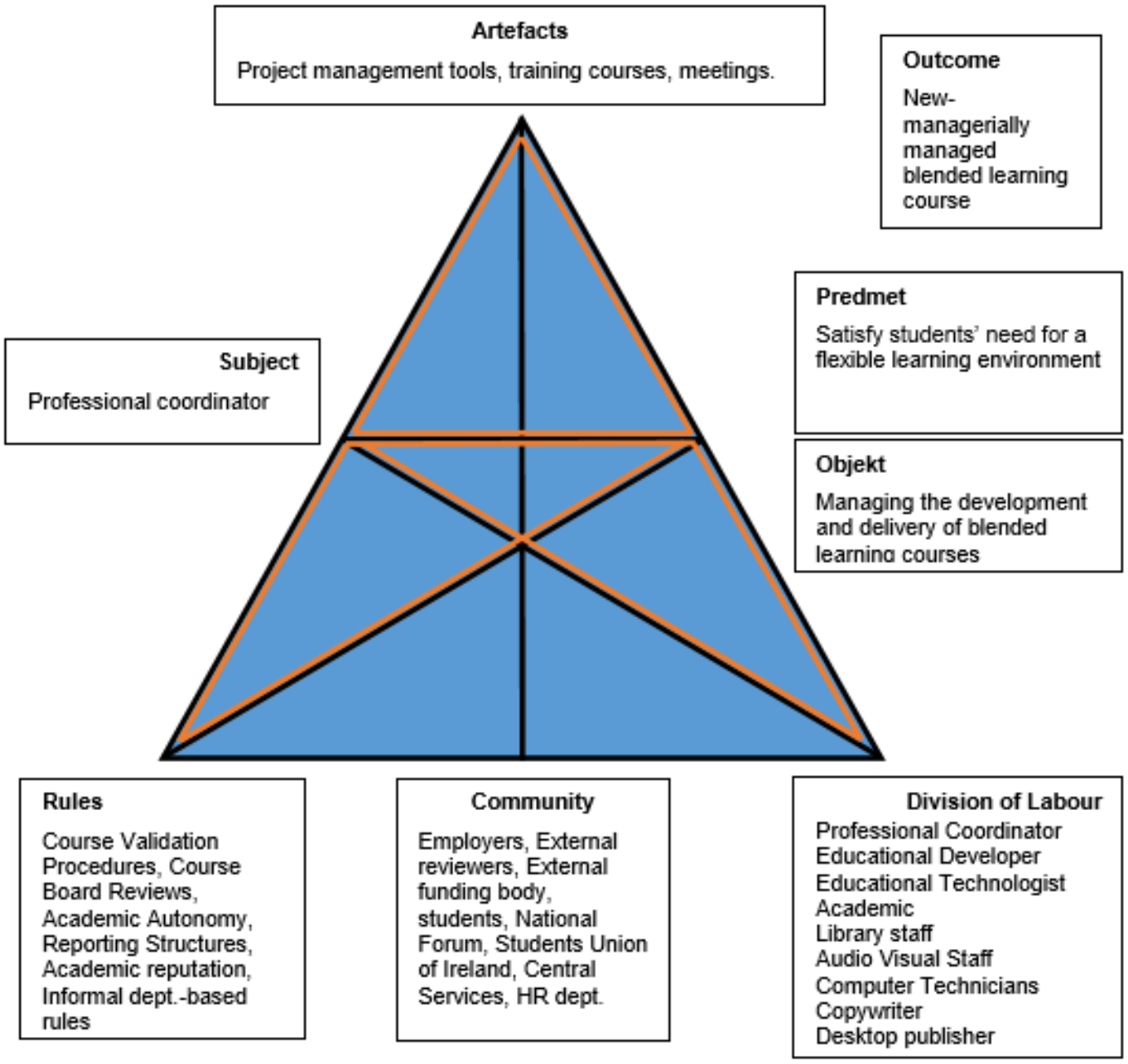
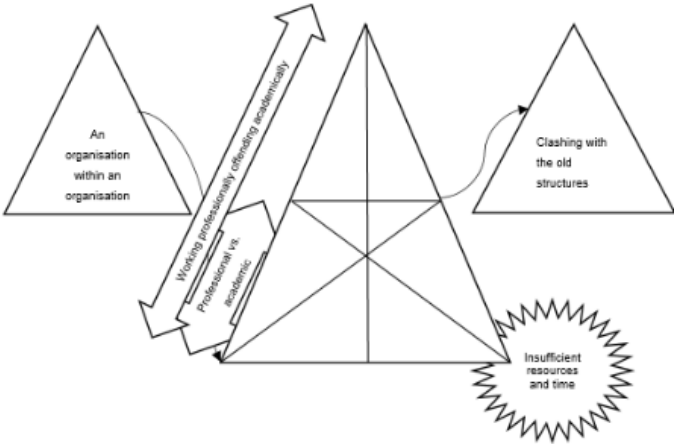


Figure 2. HEI B with contradictions (Murphy, 2018)



activity front and centre were behind the choice of theoretical framework for this study. As was the comprehensiveness of the ASM—where holistically, activity is portrayed as a dynamic model of the subjects, artefacts and objects of activity within a context of rules, a community, and a division of labour (Vandenberg, 2005) offering the researcher a genuine reassuring sense that they are seeing the whole picture. The real surprise, however; the real nugget in ASM and activity theory, was the pursuit of contradictions and the realisation that contradictions and trying to resolve contradictions are a driving force of change. The requirement to define and explain the primary, secondary, tertiary and quaternary contradictions in the ASM brought the value of an activity theory approach to a new level in affording the opportunity to fully explore each version of the activity.

4. The drawbacks

The ASM works as a framework to comprehensively describe an activity system and provides the vocabulary to then compare that described activity systems with other activity systems. This is a perfectly legitimate and appropriate use of the ASM, and many studies that were considered as part of the literature review for this study stopped at using ASM descriptively. To utilise the ASM to identify contradictions, as was the case in this study, does bring with it an additional level of complication. There are seven elements to the ASM to consider, as well as the mediating relationships between each of the seven elements and then the four levels of contradictions. When the contradictions aspect of the ASM are taken into consideration, the typical triangle image used to view the ASM should, more accurately, be a 3-D model with multiple layers to encompass the contradictions. The ASM does work as a framework to comprehensively describe an activity system but, with this study, there was a need to get behind the contradictions in order to identify the advantages and disadvantages of each of the different activity systems that emerged, which brought with it an additional level of complication.

4.1 Contested areas

In terms of contested areas, the relationship between the subject and the outcome is not clear. Does the object in the ASM refer to the material outcome of the activity or the objective; the motivation driving the activity. In studies examined as part of the literature review for this study, several were identified that interpreted object as motive, and a number interpreted object as material (Murphy, 2018). Kaptelinin and Nardi (2006) identify that in Activity, Consciousness and Personality (1978) Leontiev distinguished between the Russian words predmet, which referred to objective and objekt, which referred to the material aspect of object, but that in the translation of the text into English the word object is used to refer to both predmet and objekt. While this dual definition of object can open up activity theory for use in psychology, seeking the predmet, and organisational theory, seeking the objekt, the lack of clarity on what is the object of an activity can prove disorientating. Mwanza's solution, which was adopted for this study, was to use the hyphenated term object-ive to try and address the two interpretations of object.

4.1.1 Defining contradictions

Another contested area is the lack of a clear definition of contradiction. Engeström and Sannino (2011), tried to distinguish between systemic contradictions and their manifestations in their 'Types of Discursive Manifestations of Contradictions', which describes the features of four manifestations of contradictions— double binds, conflicts, critical conflicts and dilemmas—and outline some what they call 'linguistic cues' that distinguish the manifestation. However, in a review of 27 CHAT studies that referred to contradictions, 23 failed to make this distinction between systemic contradictions and their manifestations (Murphy, 2018). For this study, utilising the linguistic cues identified by Engeström and Sannino (2011) and being able to clarify the difference between double blinds, conflicts, critical conflicts and dilemmas brought an additional level of clarity to the analysis of data. When reading studies where this distinction is not clear, there was a sense that the value of identifying contradictions as the driver of change was undermined.

4.1.2 Cultural context

A more fundamental issue with activity theory is the extent to which context is accurately considered. In 3.4, it was noted that activity theory allowed for a comprehensive consideration of the purpose of the study, with the seven elements of the ASM ensuring context to be taken into consideration. Blunden (2010) has noted cultural context as a limitation of activity theory, however. He cites Cole's assertion that a series of actions cannot be taken out of one cultural context and placed in another with the assumption that there will be a similar outcome. Rather, as Cole (1996, cited in Blunden, 2010) asserts, the cultural or social context would have to be included as a smallest unit of the subject matter, which includes all the properties of the process. However, Blunden (2010) notes that, as has been identified by other writers "even if it is admitted that it is necessary to include the context, it leads to an infinite regress. Where do you stop?" (2010, p. 252). An inability to address cultural difference at the smallest unit of the subject matter undermines the claim that activity theory allows for a context relevant analysis. For this study, the cases in question were, on the surface at least, not culturally different, in that the three HEIs were in the same sector. More importantly, however, is the idea that if there were cultural differences between the HEIs examined, the significance of the cultural differences would not necessarily have been highlighted through the use of the ASM as a mechanism for analysis.

5. Practitioners show the way

Despite the complexity and the acknowledged contested areas, what kept the focus on activity theory was seeing the use of the framework through the eyes of practitioners. There are three examples of this. First, there are the articles by Daisy Mwanza. She had a wonderfully practical take on using activity theory. The manner in which she traced her use of the theory offered the realisation that it could work. Second, there was an opportunity to speak at a symposium where the frustrations and difficulties being experienced with activity theory were openly discussed that led to an encounter with a researcher who identified that the elements of the ASM could be used as predefined codes, which was a light-bulb moment. Finally, watching a recording of another seminar on activity theory, where the emphasis was on having students in the room explore its application was also significant. These three encounters, plus lots more reading and taking the time to work through the logic of the theory of activity theory, brought back that enthusiasm that was first encountered at the original seminar.

6. Next steps

Since this study, activity theory has been used extensively in practice as a senior manager in a HEI. For example, the ASM is being used in an exercise to map the activity of learner support outside the curriculum in order to provide the holistic overview of academic support and to identify the potential for change embodied in the relationships between the elements and the apparent contradictions. Future plans for research into organisational behaviour in higher education are centred on a desire to compare different approaches to the management of academic oversight and the quality assurance of the delivery of academic programmes. Here, activity theory would appear to be the ideal framework to guide the comparison. However, the cultural context within which the different approaches exist may prove significant, in which case, the limitations of activity theory to examine culturally specific context highlighted by Cole (cited in Blunden, 2010), would need some consideration. The idea that the introduction of digital technology has reduced the use value of academics has proved controversial when discussed at conferences and get-togethers with academics. A study, guided by activity theory, that more robustly puts that assertion to the test would also seem an appropriate next step.

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