

Connective Enactment and Collective Accomplishment in Professional Practices

Stephen Kemmis^{1,2}, & Nick Hopwood^{3,4}

1. Charles Sturt University, Australia.
2. Federation University, Australia.
3. University of Technology Sydney, Australia.
4. University of Stellenbosch, South Africa.

Contact: Stephen Kemmis, Charles Sturt University, Australia.

stephen@stephenkemmis.com

Abstract

Working with others is key to professionalism but little attention has been given to how specific actions contribute to collective practices to secure shared ends in work. This essay considers how professionals' actions connect with one another in distributed (multi-participant) work practices. Recently, Hopwood, Blomberg, Dahlberg and Abrant Dahlgren identified a new way of viewing how professionals in distributed practices coordinate their actions to accomplish shared ends, in terms of phenomena they describe as “connective enactments” and “collective accomplishments”. In this essay, we explore the possibility that these phenomena have far more general application than the cases studied by Hopwood et al. We use the theory of practice architectures to outline this more general account and test its viability in by examining a case of culinary services practices. This more generalised account may offer new ways to understand features of distributed work practices and enhance professional practice and learning.

Keywords

Connective enactment, collective accomplishment, practice, practice architectures, interprofessional practice, professional collaboration

How do the actions of different participants in a practice mesh together as the practice unfolds? This question was largely overlooked in the literature of practice theory until Hopwood, Blomberg, Dahlberg, and Abrant Dahlgren (2022) threw light on the intermeshing of different health professionals participants' actions in a healthcare simulation. The intermeshing occurred in two phases which they described as "connective enactment" and "collective accomplishment". In this essay, we take the opportunity to revisit their ideas, stretching them over a wider theoretical and empirical canvas, in a dialogue between authors, ideas and texts. Thus, we (1) briefly outline these notions as Hopwood et al. described them, then (2) explore the possibility that they may open the door to a more general understanding of how participants' actions intermesh in practices. We do so by presenting an argument, based on the theory of practice architectures (e.g., Kemmis, 2022; Kemmis & Grootenboer, 2008; Kemmis et al., 2014), that connective enactment and collective accomplishment occur when the sayings, doings, and relating of different participants in practices interact with one another. We then (3) argue that this elaboration opens the way to a more general conceptualisation of connective enactment and collective accomplishment that will help practice researchers to give compelling accounts of how the actions of participants intermesh in a wide variety of practices. Next, we (4) test this possibility by briefly analysing a case of culinary services practice described by Mary Johnsson in 2012, nearly a decade before Hopwood et al. identified the phenomena of connective enactment and collective accomplishment. This argument leads us to (5) conclude that the more general conceptualisation we have outlined offers a promising new way to understand how the actions of different participants intermesh in the conduct of practices.

Stephen Kemmis initiated the writing of this essay as a response to the Hopwood et al. (2022) article. He sent a copy of an early draft to Nick Hopwood to invite comment about it. In the subsequent correspondence, Nick's role transformed into that of co-author, thus becoming a respondent to himself.

Connective enactment and collective accomplishment

Practices in many work settings are *distributed*; that is, they rely on contributions from multiple people performing distinct actions in coordinated ways. In our view, accounting for these contributions and the connections between them is important in understanding distributed professional practices and how they unfold as they do. Equally, understanding these phenomena is important for professional education, that is, for initiating learners into professional practices that rely on the coordinated efforts of different people in interprofessional practice, in the relationships between professional practitioners and those

they serve (e.g., between health professionals and patients, teachers and students, and architects and clients), and in many kinds of distributed practices in everyday life (e.g., among players and others in a football game).

Hopwood, Blomberg, Dahlberg, and Abrandt Dahlgren (2022) identified previously unnoticed ways in which practitioners in distributed practices engage with one another to accomplish shared ends via *connective enactments* and *collective accomplishments*. They studied three cases of a simulation in a Swedish healthcare professional learning setting for interprofessional teams including clinicians, midwives, and nurses. The simulation focussed on dealing with shoulder dystocia, an unpredictable emergency that occasionally arises in childbirth when the baby's shoulder gets jammed against the mother's pubic bone. Swift action is necessary to successfully release the baby; without it, the baby can suffer serious injury or even death. Hopwood et al. presented vignettes of the simulation, showing how the participants spoke to one another during the simulations, narrating what they were doing so the others could follow their actions in relation to the HELPER mnemonic, which denotes a sequence of things that need to be done to address the emergency.¹ In enacting HELPER in the simulation, each participant adapted their actions to take account of the actions of the others, sometimes switching roles, to collectively accomplish the (simulated) delivery of the baby.

Hopwood et al. identified two phenomena that occurred during the simulations: first, the *connective enactments* by which participants oriented together as a team towards what needed to be done, and second, their *collective accomplishments* as they coordinated their actions to secure a safe outcome. These concepts highlight features of practice that cannot be produced by individuals acting alone, but which depend, rather, on interwoven individual actions that collectively accomplish the ends towards which the practice is undertaken.

Referring to the sayings, doings, and relating that compose practices, Hopwood et al. (2022, p. 8-9) articulated how individuals' connective enactments (reaching out to connect with one another) and collective accomplishments (collectively working towards outcomes) were manifested in these simulations:

Sayings, doings and relating were found to hang together through three distinctive connective enactments:

1. Narrating, listening, and attuning. Giving verbal commentary on one's actions and their consequences, which become connected with the actions

¹ The mnemonic HELPER calls for the following actions from health professionals identifying a case of shoulder dystocia: H=call for Help; E=evaluate for Episiotomy; L=Legs (the McRoberts manoeuvre); P=suprapubic Pressure; E=Enter manoeuvres (internal rotation); R=Remove the posterior arm; R=Roll the patient (Baxley & Gobbo, 2004).

with others through listening and attuning. [In this essay, we refer to this as CE1]

2. Questioning, seeking, and giving confirmation. Expressing uncertainty about what to do, echoing assertions or commitments. [CE2]

3. Directing actions. Instructing, guiding or suggesting to others, decision making, and directing continuation or change in actions or roles. [CE3]

These connective enactments were momentary, concrete actions. Three collective accomplishments were also identified:

1. Fluid role-switching. Taking roles that vary from those assigned to professionals in “normal” practice, and taking turns in performing specific actions. [CA1]

2. Coordinated, responsive sequencing and pacing. Collectively determining what to do next, when to continue and when to change actions, based on specificities of the unfolding situation. [CA2]

3. Producing calm and security. Enabling practitioners and the mother to feel calm and secure in what is happening, despite the urgency and risk of the situation. [CA3]

The collective accomplishments were key to how praxis was enacted, and the connective enactments were the means to realise the collective accomplishments.

The notions of connective enactment and collective accomplishment arose in the interpretation by Hopwood et al. of the evidence in this particular case. Working with others is common in many if not all professional practice contexts, however. This begs the question of whether these phenomena occur in other cases of professional practice. If they do, connective enactment and collective accomplishment could be useful new concepts to capture and further study how the specific actions of individuals contribute to collective ends—exemplifying the notion of the “collective” (Stetsenko, 2019). That is, these concepts further reveal the sociality of distributed professional practices, without evacuating the contributions of individuals. Improved understandings of how connective enactment and collective accomplishment occur might thus help educators more sensitively to prepare aspiring professionals to participate in the distributed practices typical of their professions.

This essay proceeds from the conjecture that connective enactment is that part of distributed practice which achieves *participants’ mutual orientation* to features of a situation, while collective accomplishment is the part which *guides and coordinates*

participants' individual actions as their collective practice unfolds, as they respond, individually and collectively to the feedback they attune to as they act, so their distributed efforts do indeed accomplish their common end: the object of the practice. Probing this conjecture, we now revisit and expand on the relationship between the specific concepts used by Hopwood et al. (2022) and the wider theory of practice architectures. We begin by focusing on intersubjective space, because it is in this theoretical terrain that the specific concepts might gain wider purchase.

The theory of practice architectures: Intersubjective space

In practice, the phenomena of connective enactment and collective accomplishment occur in particular kinds of intersubjective spaces, some of which have their own recognisable “signatures”. In the Hopwood et al. (2022) shoulder dystocia simulations, “narrating, listening, and attuning”, for example, happened in semantic space, and flowed into actions in material space, coordinated by relationships in social space. The focus in “coordinated, responsive sequencing and pacing” might appear to be action in material space-time, but it was guided by ideas about what should be done, in semantic space, and by the relationships between the different actors as they coordinated with one another. Similarly, “producing calm and security” might seem to focus on the social space inhabited by the health team and the mother and baby, but it was also shaped in semantic space (e.g., ideas about what will produce calm) and in material space (e.g., acting in measured ways intended to produce calm). The simulation of the shoulder dystocia emergency Hopwood et al. describe has its own distinctive “signature” as an emergency that requires calm, interprofessional coordination. For example, in relation to

1. the sayings of this distributed practice, the health team talks and thinks in the language of shoulder dystocia and the acronym HELPERR;
2. the doings of the practice, they also engage in coordinated ways with the embodied mother and baby, the embodied actions of the health team, and the furniture and equipment in the site; and
3. the relatings of the practice, they work as a team, in a spirit of engaged collaboration, with fluid role-switching and coordinated mutual action to free the (simulated) baby and preserve the wellbeing of the mother.

Once shoulder dystocia was identified, some features of the delivery and the delivery room faded into the background, while those aspects essential to addressing the dystocia moved into the foreground.

The theory of practice architectures provides a framework to understand aspects of professional practices where people work together. The concepts of connective enactment and collective accomplish are embedded in this framework. Practices are not simply the

realisations in action of individuals' intentions; they have three "extra-individual" dimensions (Kemmis & Grootenboer, 2008) that together compose the *intersubjective spaces* (Kemmis, 2019, 2022; Kemmis et al., 2014) in which practices occur. According to the theory of practice architectures, people encounter one another in intersubjective space as

1. interlocutors in semantic space, in the medium of language, among prefiguring (Schatzki, 2002) cultural-discursive arrangements that include shared languages and discourses;
2. embodied persons in physical space-time, in the medium of activity and work, among prefiguring material-economic arrangements that include bodies, tools, and other material objects (including specific set-ups of objects in time and space, as, for example, in a workshop or clinical simulation setting); and
3. social beings, in the medium of social space, among prefiguring social-political arrangements that include lifeworld relationships of mutual recognition and system relationships ascribed by organisational roles.

According to the theory, practices *happen* in intersubjective spaces, which are spaces constituted not by individuals alone or even in aggregate, but by collective histories that form malleable and evolving site-specific cultures and discourses, material and economic circumstances, and social and political conditions.

When people enter the intersubjective space of a particular site, they *think* and *talk* in relevant, site-specific ways. At work, for example, they use the site-specific discourses of different occupations (e.g., share-trading, carpentry, plumbing, or community nursing). These cultural-discursive arrangements usually precede the practitioners' presence in the site; they are pre-existing elements of the culture of the site (e.g., a building site, a clinician's office, or a science classroom). Moreover, people follow strong patterns of distributed talk-in-interaction regarded as appropriate for communication in different kinds of sites: highly routinised talk in air traffic control, the informal talk between hairdressers and clients, the liturgical patterns of the church service, the patterns of classroom interaction in classes dominated by teacher talk. In this way, sites are pre-patterned and prefigured (Schatzki, 2002), to be places where particular kinds of language and discourses are used, where particular kinds of things are talked and thought about.

Secondly, sites are prefigured for different kinds of *activity* and *work*: very often, the material-economic arrangements found in a site already announce the kind of place it is and prefigure the kinds of activities and work that ordinarily happen there (e.g., the office for conducting business affairs, the clinical setting for delivering healthcare, the kitchen for cooking). On the other hand, most spaces permit multiple uses: a carpentry workshop is not just a place to learn the practices of carpentry; it may also be an excellent place for an adolescent apprentice to talk about social anxieties with a sympathetic adult. Many material

arrangements are also, themselves, constructed, often through practices, in the way a carpentry workshop for the production of roof frames was itself constructed through the practices of carpenters, who used tools previously manufactured by toolmakers. It is not only the memories of carpenters that make that place recognisable as a workshop; it is laid down in the set-up of the material arrangements themselves—set-ups that the carpenters may change and develop over time, to accomplish different purposes.

Thirdly, different sites and locations are prefigured for different kinds of relationships of *solidarity* and *power*: the university class, the supermarket, the telephone call centre. The workplace prefigures a range of workplace role relationships of power and authority alongside lifeworld relationships of collaboration, solidarity, and friendship. When they enter a new setting, newcomers know to observe how established relationships are played out there; experience teaches them that it can be easy to misunderstand how relationships are arranged and enacted in this place.

Combinations of these three kinds of arrangements form the *practice architectures* that enable and constrain participants' practices in the site. To use an ecological analogy, the arrangements form the niche conditions that make a particular practice possible and determine whether it will be sustainable. Together, practice architectures give a signature spectrum of semantic significances, action potentials, and emotional valences to the intersubjective space in a site (e.g., the different kinds of atmospheres of the dentist's surgery, the football game, or Otto's share house).

People in a site thus encounter one another not across empty space, but in spaces always already coloured or crowded with *cultural and cognitive significances; potentials for embodied, material action; and social and emotional valences*—for themselves and for others. By bringing these significances, action potentials, and valences to a site, people reproduce it as a site of a certain kind and, as they engage with the arrangements present in the site, their possibilities for practice are mediated—enabled and constrained—by their engagement with such locally-specific, historically formed features of intersubjective space.

The notion of intersubjective spaces in which people encounter one another also helps to make more tangible the dialectical idea of the “collectivual” (“collective” + “individual”) suggested by Anna Stetsenko (2013, 2019). Marx's (1845, n.p.) third thesis on Feuerbach expressed a version of this idea as follows:

The materialist doctrine that [people] are products of circumstances and upbringing, and that, therefore, changed [people] are products of changed circumstances and changed upbringing, forgets that it is [people] who change circumstances and that the educator must [her or] himself be educated.

Figure 1 aims to depict this idea in the form of a lemniscate to capture the movement of the dialectic, the back-and-forth flow, between the individual and the social. The lines in the

lemniscate are deliberately roughly drawn and overlapping, to evoke the somewhat disordered way the dialectic unfolds moment-to-moment in everyday reality.

Figure 1. The dialectic of the individual and the social. Reproduced with permission from Kemmis (2022), p. 97.

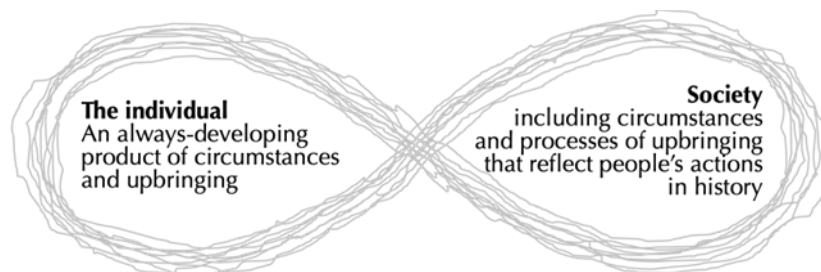
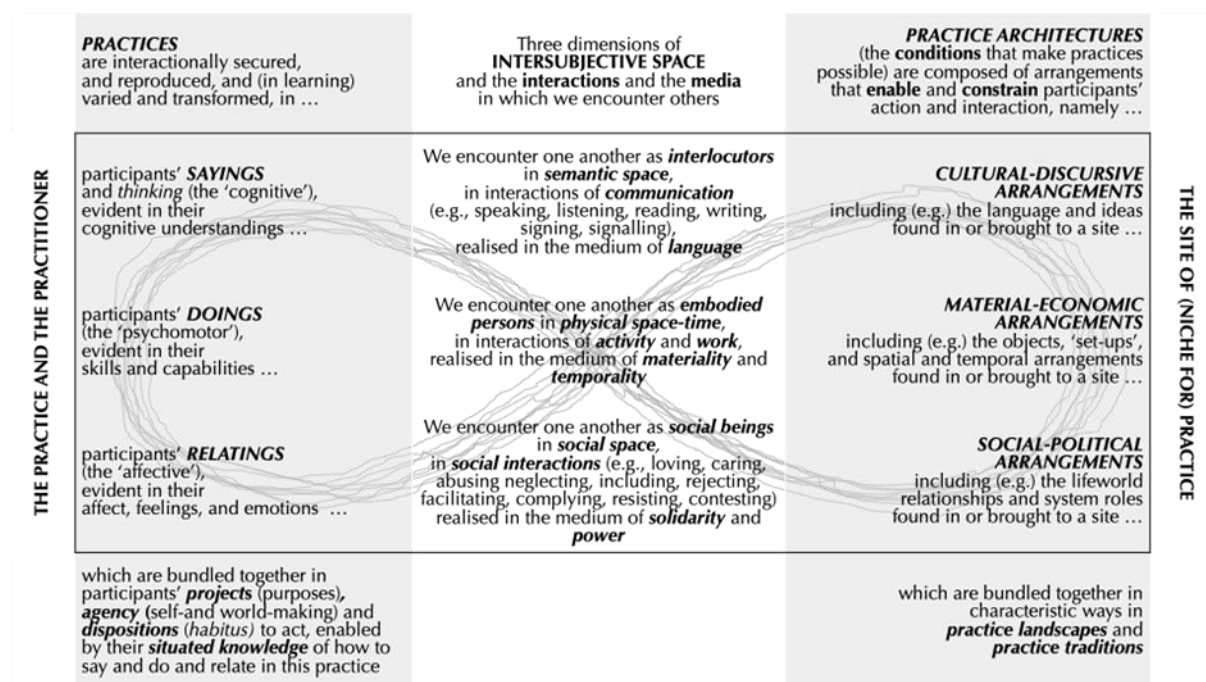


Figure 2, which extends this idea and summarises key elements of the theory of practice architectures, includes this dialectic of the individual and the social as it plays out in the dialectic between the sayings, doings, and relating that compose people’s practices and the different kinds of arrangements that together form the practice architectures that enable and constrain practices.

Figure 2. The dialectic of practices and arrangements (practice architectures). Adapted and reproduced with permission from Kemmis et al. (2014), p. 38, and Kemmis (2022), p. 97.



This account of practices as enabled and constrained by practice architectures reflects practice theorist Theodore Schatzki’s (2012) notion of *practice-arrangement bundles*. He regards the relationship between practices and arrangements as “fundamental to analysing social life” (2012, p. 16). He says:

To say that practices and arrangements bundle is to say (1) that practices effect, use, give meaning to, and are inseparable from arrangements while (2) arrangements channel, prefigure, facilitate, and are essential to practices (Schatzki, 2012, p. 16).

The theory of practice architectures shares this view and regards practices as bundling not only with material entities (arrangements), but also with discursive and with social arrangements. Thus, the sayings of a practice bundle principally (but not only) with cultural-discursive arrangements, its doings bundle principally (but not only) with material-economic arrangements, and its relatings bundle principally (but not only) with social-political arrangements. In reality, sayings, doings, and relatings do not appear separately from one another; they are always entwined together, like multiple strands in a rope or the two strands in the double helix structure of DNA (deoxyribonucleic acid) that contains the genetic information which guides the reproduction, differentiation, and growth of cells.

Distributed practices

Many professional practices are not accomplished by single individuals acting alone; rather, they are *co-produced* by people acting together (e.g., a doctor and a patient). Such practices are *distributed*: they are accomplished through the co-participation of multiple actors. The work of most professions is accomplished through varieties of distributed practices. As well as the synchronous co-present forms of teamwork around a patient in an emergency (in the simulation in Hopwood et al.'s 2022 paper), practices can be distributed through different responsibilities (e.g., on a building site), or different professional contributions over extended periods of time (e.g., in community care and services; Reich et al., 2017).

For example, Kemmis et al. (2020) describe how, in distributed classroom talk-in-interaction, the sayings, doings, and relatings of teachers both prompt and respond to the sayings, doings, and relatings of students, so that the nexus between the teacher's and students' actions co-produce distributed *pedagogical practices*. In such distributed practices, the sayings, doings, and relatings of one participant become practice architectures that enable and constrain the practices of another, in various kinds of reciprocal relationships between the different people involved. Such reciprocal relationships include (e.g.) one participant's mirroring, answering, continuing, or extending the sayings, doings, and relatings of another participant in the practice.

Exploring a more general formulation

Using the theory of practice architectures as a framework, we now explore the possibility that the phenomena of connective enactment and collective accomplishment can be generalised to account for the way professionals and others engage with one another to produce distributed practices.

Perhaps the connective enactments Hopwood et al. (2022) identified in the case of the shoulder dystocia simulation herald a variety of ways in which people connect and engage

with one another as they share the work of *orienting to* one another’s actions in distributed practices. Perhaps the collective accomplishments Hopwood et al. identified herald a variety of ways in which people *coordinate* and *mutually perform* their actions to accomplish particular ends. No doubt it will always be an empirical question whether connective enactments and collective accomplishments can be observed in the unfolding of distributed practices, like people’s practices in a university seminar, or a football game, or preparing meals in a restaurant. On this view, the unfolding phases of connective enactment are observed when people direct, suggest, signal, sign, prompt, and orient people to coordinate their efforts. Equally, in phases of collective accomplishment, participants coordinate their actions to accomplish their shared ends. If this is so more generally, we might then conjecture that connective enactment and collective accomplishment will be observable in many, perhaps most, distributed practices.

Table 1 summarises this more general formulation of the phenomena of connective enactment and collective accomplishment.

Table 1. Three faces of connective enactment and collective accomplishment.

	Connective enactments (CE):	Collective accomplishments (CA):
1. In semantic space	CE1: Conscious, deliberate, mutual, reciprocal orientation and re-orientation in participants’ <i>talk, thinking, hearing, writing, and reading</i> as they connect their <i>sayings</i> in the practice.	CA1: Mutually performing relevant <i>talk, thinking, hearing, writing, and reading</i> that accomplish mutual understanding of what is happening and the outcomes of what happens.
2. In physical space-time	CE2: Mutual orientation and reorientation in what participants <i>do</i> in their interactions with one another, and with the physical entities and set-ups in the site, as they connect their <i>doings</i> in the practice.	CA2: Mutually performing relevant <i>actions (doings)</i> that accomplish coordinated action and material ends.
3. In social space	CE3: Mutual orientation and reorientation in how participants <i>relate</i> to one another, and how they feel, in the situation as they connect their <i>relatings</i> in the practice.	CA3: Mutually performing relevant <i>relationships (relatings)</i> that accomplish feelings, emotions, and ways of being together as the practice unfolds and as the result of working together.

These three faces of connective enactment and collective accomplishment are only analytically distinct. In life, they are always interwoven, as, for example, in the case of *calm* in the shoulder dystocia example. Team members are mutually conscious of the idea “calm” (sayings): they are aware that it is a crucial professional obligation in difficult circumstances like these. They also have to enact calm (doings) and do so as a team, not only as individuals. And they are committed to relating (relatings) to one another, and to the mother, in a collectively calm and measured way. *Practising* calm is a unity that shows its face in each of these three dimensions of practices.

In the examples of connective enactment in Hopwood et al. (2022),

1. participants connect with one another in their *sayings* by (e.g.,) narrating and listening;
2. they connect with one another in their *doings* by (e.g.,) expressing uncertainty about what to do, and echoing assertions or commitments; and
3. they connect with one another in their *relatings* by (e.g.,) directing change or continuation in one another's roles.

In the shoulder dystocia example, these three strands became increasingly tightly interwoven as the participants connected and coordinated their understandings, actions, and roles to perform the distributed practice and thus jointly approached the collective accomplishment of their shared ends: delivering the baby safely and preserving the wellbeing of the mother and baby.

To test the plausibility of the conjecture that connective enactment and collective accomplishment can indeed be observed in other distributed practices, we now turn to the description of a case of distributed practice written before Hopwood et al. (2022) identified these phenomena.

Testing the viability of the more general conceptualisation

Mary Johnsson (2012, p. 58) presents a vivid account of practices associated with culinary service in a commercial restaurant. As a trial to explore whether the notions of connective enactment and collective accomplishment are to be found in other cases of distributed practice, the left column of Table 2 quotes Johnsson's description of the case, and the right column presents our annotations indicating where there is evidence of connective enactments (CE) and collective accomplishments (CA).

Table 2. Connective enactment and collective accomplishment in a culinary services example.

Connective Enactment and Collective Accomplishment in Professional Practices

Johnsson's (2012, p.58) description	Evidence of connective enactments (CE) and collective accomplishments (CA)
<p>It is during the pressure of service that prior practice preparations, skills, knowledge and experience must be contextually applied [by distributed participants, in ways that have consequences for the practitioner (preparing the grilled lamb cutlet), event (delivering two customer mains simultaneously to the same table), practice (the professionalism and flair of commercial cookery) and enterprise (sustaining the reputation of the restaurant). Work flow and coordinative understandings are distributed 'in the heat of the moment' across different practitioners because the typical organization of kitchens assigns chefs by station and function (e.g. individual responsibilities for meal components such as grill, cold larder, dessert), yet outcomes (e.g. customer orders) require simultaneous delivery (e.g. all the finished main orders including their accompaniments for all customers at one table at the same time).</p>	<p>The kitchen staff need to connect their knowledge and experience (CE1), contextually applying these in practice, oriented to and in light of each other's actions (CE2), and to establish appropriate relatings (CE3).</p> <p>The prepared lamb cutlet, the delivery of two mains to the same table at the same time require distributed practices to converge through particular coordinative understandings (CA1) and work flows that converge in time (CA2); all the CEs also contribute to other shared ends around flair and reputation (CE3). Individual contributions to these are organised through station and function responsibilities (CE3), which co-produce particular components of meals.</p>
<p>Service work flow is 'bursty' and sporadic. It is initiated by the event of an order (usually activated by docket information from an order machine) which then generates an intense series of parallel activities from multiple practitioners that are adjusted as required by a sous-chef who is the kitchen operations manager. For example, the sous-chef yelling 'two minutes to the lamb' allows the chef preparing the vegetable accompaniment for that lamb dish to judge whether she must accelerate personal preparations so that the total order can be completed in 2 min. In this practice, the end results of quality, delivered and completed customer orders are intimately linked to their means (e.g., how long the lamb cutlet should be grilled to remain tender, juicy yet cooked, or how to retain the heat and seasonings of the accompanying sauce, until the time the customer first tastes it on the plate). Individual practitioner roles and activities can be differentiated – who produced the dessert, who dressed the salad. Yet it is the cumulative effects of many holistic outcomes that sustain the standards of excellence for the overall practice – for example, customer preferences for a particular cuisine, the explicit and implicit techniques that govern that particular culinary style and the ambience and efficiency in delivering</p>	<p>The workflow (CA2) depends on connective spoken (CE1) and embodied (CE2) responses to the orders: they are parallel but not independent or identical, having a distinctive social organisation (CE3).</p> <p>Time-calling (CE1) allows not only for responsive actions (CE2), but also contributes to others' and shared judgements – collective accomplishments of mutual understanding (CA1) and timed performance (CA2). The specific contributions adjust and attune not only to particular customer orders, but also to the specificities of other chefs' comments and actions, accomplishing a fluid differentiation in roles (CA3).</p>

This small trial suggests that connective enactment and collective accomplishment can be understood in relation to the sayings, doings, and relatings of practices, even though Johnsson's (2012) description of this practice of culinary service was published nine years before Hopwood et al.'s conceptualisation appeared.

Conclusion

This essay began by canvassing how the phenomena of connective enactment and collective accomplishment trace the ways in which different kinds of work (orientation and reorientation; coordination of efforts) occurred in the particular case of a simulation of health professionals responding to shoulder dystocia in which the practitioners *re-oriented* themselves to address the transformed situation and began to *coordinate their efforts and actions differently* to collectively accomplish the safe delivery of the child, and the safety of the mother. Using the theory of practice architectures, and the way it construes the intersubjective spaces in which practices occur, we aimed to show how the phenomena of connective enactment and collective accomplishment may be generalised beyond the case studied by Hopwood et al.

Testing the viability of the notions of connective enactment and collective accomplishment in a different case of practice, Johnsson's (2012) study of culinary services, suggested that these phenomena could also be found in this case. It is likely that future research will reveal connective enactment and collective accomplishment occurring in distributed practices in many diverse contexts. For example, Lave and Wenger (1991) and Lave (2019) describe the processes of *situated learning* that take place when newcomers to a workplace learn how to become full participants in workplace practices by "legitimate peripheral participation" in which they try out the work practices of "old hands". Future researchers into workplace practices and education might investigate whether the notions of connective enactment and collective accomplishment help to flesh out how, empirically, legitimate peripheral participation happens as newcomers are initiated into different kinds of work practices, and whether they do so in the kinds of ways that the healthcare teams studied by Hopwood et al. achieved mutual orientation in the shoulder dystocia simulation, and coordinated their actions to accomplish the collective ends of successfully delivering a baby without harm to mother or child.

A key contribution of these ideas to understanding and researching professional practices lies in their connection to the notion of the collectividual (Stetsenko, 2019) and parallels in frameworks such as the theory of practice architectures. This is important if we are to recognise the collective nature of professional practices without losing all sight of and grip on individual contributions to those practices. While we may act together with others in practice, we must also always act ourselves, aware of and responsible for our own contributions. A key aspect of professionalism is not just to follow rules and enact theoretical knowledge, but to avoid harm and suffering, and to act for the good of each person and the good for humankind. This is the form of action Aristotle described as *praxis* (MacIntyre, 1983). Taking a neo-Aristotelian view of praxis, Kemmis and Smith (2008, p. 4) described praxis as:

[...] action that is morally committed, and oriented and informed by the traditions of the field. [...] Praxis is what people do when they take into account all the circumstances and exigencies that confront them in the particular moment and then, taking the broadest view they can of what is best to do, they act. (p. 4).

This neo-Aristotelian view of praxis is extended by a complementary Marxian view of praxis. As Mahon, Heikkinen, Huttunen, Boyle and Sjølie (2020, p. 27) wrote:

[...] in praxis, actors are aware of the historical situatedness of what they are doing. They are conscious of their actions in the present being shaped by history (e.g., past actions/events and consequences of past actions/events), and of how they are shaping unfolding action [...] that is, how their actions are “making” history (Kemmis, 2008). This evokes the notion of educational praxis as “history-making educational action” (Kemmis et al., 2014, p. 22; see also Kemmis & Trede, 2010), which links to the [...] Marxian notion of praxis.

Professional practice informed by such views is rightly described as *professional praxis*. It embodies a view of professionalism which recognises not only the collective goods of the profession but also acts for the collective good, as well as the individual good, of the people the profession serves. The notions of connective enactment and collective accomplishment in distributed professional practices point to ways in which professionals (and those they serve) enact mutual orientation as they work out what is to be done, and coordinated action directed towards accomplishing that end. These notions flesh out the idea of the collectividual by suggesting ways in which individual professional practitioners orient and act in the conduct of collective distributed practices.

The notions of connective enactment and collective accomplishment provide useful analytical foci not only for understanding how work is done, but also for understanding the learning that makes that work possible. The notions were originally recognised in a formal professional education setting and identified as conceptual labels for things that were being taught and learned in order to change practices. It turns out that they may be relevant for understanding how participants’ actions are coordinated in many distributed practices to accomplish shared ends. No doubt further research will identify the forms that connective enactment and collective accomplishment take in a range of different work settings, with implications for the design of site-specific forms of pedagogy through which the mutual orientation and coordination of participants’ actions in distributed practices can be taught and learned, thus enhancing both professionalism and professional practice.

Declaration

Both authors confirm that there are no interests to declare.

Article history

Received: 28 Jan 2022

Accepted: 7 Sep 2022

Published: 30 Sep 2022

References

- Baxley, E. G., & Gobbo, R. W. (2004). Shoulder dystocia. *American Family Physician*, 69(7), 1707-1714. <https://www.aafp.org/pubs/afp/issues/2004/0401/p1707.html>
- Hopwood, N., Blomberg, M., Dahlberg, J., & Abrandt Dahlgren, M. (2022). How professional education can foster praxis and critical praxis: An example of changing practice in healthcare. *Vocations and Learning*, 15, 49-70. <https://doi.org/10.1007/s12186-021-09277-1>
- Johnsson, M. C. (2012). Sensing the tempo-rhythm of practice: The dynamics of engagement. In P. Hager, A. Lee, & A. Reich (Eds.), *Practice, learning and change: Practice-theory perspectives on professional learning* (p. 51-65). Springer. https://doi.org/10.1007/978-94-007-4774-6_4
- Kemmis, S. (2008). Practice and practice architectures in mathematics education. In M. Goos, R. Brown, & K. Makar (Eds.), *Navigating currents and charting directions: Proceedings of the 31st annual conference of the mathematics education research group of Australasia* (p. 17-28). MERGA. <http://citeseerx.ist.psu.edu/viewdoc/summary?doi=10.1.1.582.1693>
- Kemmis, S. (2019). *A practice sensibility: An invitation to the theory of practice architectures*. Springer. <https://doi.org/10.1007/978-981-32-9539-1>
- Kemmis, S. (2022). *Transforming practices: Changing the world with the theory of practice architectures*. Springer. <https://doi.org/10.1007/978-981-16-8973-4>
- Kemmis, S., Edwards-Groves, C., Jakhelln, R., Choy, S., Wärvik, G.-B., Gyllander Torkildsen, L., & Arkenback-Sundström, C. (2020). Teaching as pedagogical practice. In K. Mahon, C. Edwards-Groves, S. Francisco, M. Kaukko, S. Kemmis, & K. Petrie (Eds.), *Pedagogy, education and praxis in critical times* (p. 85-116). Springer. https://doi.org/10.1007/978-981-15-6926-5_5
- Kemmis, S., & Grootenboer, P. (2008). Situating praxis in practice: Practice architectures and the cultural, social and material conditions for practice. In S. Kemmis, & T. J. Smith (Eds.), *Enabling praxis: Challenges for education* (p. 37-64). Sense Publishers. https://doi.org/10.1163/9789087903275_004
- Kemmis, S., & Smith, T. J. (2008). Praxis and praxis development. In S. Kemmis, & T. J. Smith (Eds.), *Enabling praxis: Challenges for education* (p. 3-13). Sense Publishers. <https://doi.org/10.1163/9789087903275>
- Kemmis, S., & Trede, F. (2010). Practice and developing future practice. In J. Higgs, D. Fish, I. Goulter, S. Loftus, J.-A. Reid & F. Trede (Eds.), *Education for future practice* (p. 29-40). Sense Publishers.

- Kemmis, S., Wilkinson, J., Edwards-Groves, C., Hardy, I., Grootenboer, P., & Bristol, L. (2014). *Changing education, changing practices*. Springer. <https://doi.org/10.1007/978-981-4560-47-4>
- Lave, J. (2019). *Learning and everyday life: Access, participation and changing practice*. Cambridge University Press. <https://doi.org/10.1017/9781108616416>
- Lave, J., & Wenger, E. (1991). *Situated learning: Legitimate peripheral participation*. Cambridge University Press. <https://doi.org/10.1017/CBO9780511815355>
- MacIntyre, A. (1983). *After virtue: A study in moral theory* (2nd ed.). Duckworth.
- Mahon, K., Heikkinen, H. L. T., Huttunen, R., Boyle, T., & Sjølie, E. (2020). What is praxis? In K. Mahon, C. Edwards-Groves, S. Francisco, M. Kauko, S. Kemmis, & K. Petrie (Eds.), *Pedagogy, education, and praxis in critical times* (p. 15-38). Springer. <https://doi.org/10.1007/978-981-15-6926-5>
- Marx, K. (1845). *Theses on Feuerbach*. Marxist Internet Archive. <https://www.marxists.org/archive/marx/works/1845/theses/index.htm>
- Reich, A., Rooney, D., & Hopwood, N. (2017). Sociomaterial perspectives on work and learning: Sites of emergent learning. *Journal of Workplace Learning*, 29(7/8), 566-576. <https://doi.org/10.1108/JWL-05-2016-0034>
- Schatzki, T. R. (2002). *The site of the social: A philosophical account of the constitution of social life and change*. Pennsylvania State University Press. <https://doi.org/10.1515/9780271023717>
- Schatzki, T. (2012). A primer on practices: Theory and research. In J. Higgs, R. Barnett, S. Billett, M. Hutchings, & F. Trede (Eds.). *Practice-based education: Perspectives and strategies* (p. 13-26). Sense. <https://doi.org/10.1007/978-94-6209-128-3>
- Stetsenko, A. (2013). The challenge of individuality in cultural-historical activity theory: “Collectivindual” dialectics from a transformative activist stance. *Outlines. Critical Practice Studies*, 14(2), 7-28.
- Stetsenko A. (2019). Radical-transformative agency: Continuities and contrasts with relational agency and implications for education. *Frontiers in Education*, 4(148), Article e148. <https://doi.org/10.3389/feduc.2019.00148>