Kathleen Mahon · Susanne Francisco
Stephen Kemmis *Editors*

Exploring Education and Professional Practice

Through the Lens of Practice Architectures

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In memory of our dear friend and colleague Ros Brennan Kemmis, 1949–2015. Rozzie was part of our research community when we started the journey of preparing this volume but died before it was complete. She continues to inspire us all.

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We are grateful to the directors and staff of the Research Institute for Professional Practice, Learning and Education (RIPPLE) at Charles Sturt University for various kinds of financial and intellectual support. This volume is another proof of the research creativity and productivity that RIPPLE has inspired.

The volume is another product of a decade-long collaboration between researchers in Australia, Finland, the Netherlands, Norway, Sweden, and the United Kingdom, to which we now add the Caribbean and Colombia, as members of the Pedagogy, Education and Praxis (PEP) international research network. Almost all the authors in this volume have been active contributors to the 'Practice Theory and Action Research' research programme of PEP, in which we have investigated the conditions for education, pedagogy, and praxis in our different local settings. The volume shows not only how local conditions have shaped different kinds of practice in our different settings, but also some of the common trends and pressures that affect us all, despite different local intellectual traditions and different social and

educational conditions in our countries and research settings. We are deeply grateful to our colleagues in PEP for the friendships, trust, and solidarity that have fuelled our sustained research collaborations and graced our lives. PEP has been a wonderful practice architecture that has made our collaborative practice possible both internationally and intra-nationally, as well as sustaining each of us individually.

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Preface

One of the great privileges for me as a member of the Research Institute for Professional Practice, Learning and Education (RIPPLE) for the past decade, and more recently as director of the Institute, has been the opportunity to witness the emergence and flourishing of the Pedagogy, Education and Praxis (PEP) international research network. So it was indeed an honour to be invited to write the Preface for this volume, which, for me, encapsulates the richness, depth and breadth of the scholarship generated by PEP researchers. The invitation, in turn, has prompted me to reflect anew on what has contributed to PEP's success when so many networks established with considerable enthusiasm and goodwill struggle to gain traction and fade quietly away.

This is not an inconsequential question. On the contrary, it gets to the heart of many of the challenges that research leaders around the globe are charged with addressing: How to build research capacity? How to encourage and support research that has real-world impact? And how to ensure generational renewal of an often ageing academic workforce?

My musings about PEP's success are neither theoretically nor empirically informed in any systematic sense. Rather, they are personal and experiential, grounded in occasional participation in PEP events when circumstances have permitted and in conversations over the years with current and former PEP members at Charles Sturt University and with their PEP collaborators elsewhere.

At the risk of succumbing to truism, for me this volume captures both the spirit and substance of the generous intellectual leadership that has been crucial to the sustained success of PEP. It is difficult to conceive of PEP's success without honouring the intellectual leadership of professor emeritus Stephen Kemmis. Pivotal, too, has been the culture of distributed leadership that has enabled PEP to continue to grow so organically and collegially, through its many widely dispersed nodes around the world. It is heartening to see the next generation of research leaders finding creative ways, in an era of shrinking resources, to retain the rich traditions of PEP, such as its renowned international doctoral schools, while at the same time forging new scholarly directions.

This volume also conveys the passionate shared commitment of PEP researchers to exploring possibilities for transforming practice and their belief that transformation is indeed possible. This belief is enticing, but not naïve. It is underpinned by a deep commitment to rigorous philosophical-empirical inquiry. This sustained inquiry has been the genesis for PEP's arguably most distinctive and generative contribution to date: the development and ongoing refinement of the *theory of practice architectures* as a means of understanding, challenging, changing and ultimately transforming practice.

Collectively, the chapters are a testimony to the usefulness and versatility of the theory of practice architectures. They provide a glimpse into the diversity of practice contexts in which the theory has been deployed and of how widely and rhizomatically it has travelled. This would not have happened had the theory not been able to 'speak back' so eloquently to the contexts in which it has been put to work.

I have gestured briefly to the standout roles played by strong intellectual leadership, shared passion and commitment and a useful and versatile theory. I would like to invite readers, as they engage with the chapters in this volume, to join me in continuing to reflect on what has contributed to the success and sustainability of the PEP international network. I also urge PEP researchers to take on the task of examining and articulating the success of PEP through the lens of the theory of practice architectures. For research leaders, like me, who are seeking to enhance their research leadership and capacity-building practices, there would be much to learn from such an analysis.

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Jennifer Sumsion

Foreword

Practical Theory for Complex Times

Teaching is not to be regarded as a static accomplishment, like riding a bicycle or keeping a ledger; it is, like all arts of high ambition, a strategy in the face of an impossible task. (Stenhouse 1979, p. 17)

In 1944, Kurt Lewin penned what must surely be his most oft-quoted line: "there is nothing so practical as a good theory" (Lewin 1951, p. 169). He made the quip in the context of encouraging those who work predominantly with theory to avoid regarding applied problems with 'highbrow aversion', and, conversely, encouraging practitioners to engage in actively theorising their practice.

It could be argued that in the seven decades since Lewin's essay was written, educational practice and the contexts in which it is enacted have become far more complex, as indeed has practice in other professional fields such as health, the area of Lewin's professional focus. Social, technological, and information 'revolutions' over the course of the twentieth century radically shifted the ontological and epistemological frames of professional practice within and beyond education. Taking my own expertise as a starting point, this short essay will focus specifically on the consequences of these shifts in terms of teaching practice, as but one example of the ways in which educational practice and professional practice more broadly have become more complex while increasingly simple 'solutions' to this complexity have been imagined. The collection of papers contained within this book demonstrate the usefulness of the theory of practice architectures across a diverse range of practices and settings as a resource for thinking both theoretically and practically about professional practice in these complex times.

Taking teaching practice as a case in point, then, we might see that the revolutions of the twentieth century critically transformed understandings of what it is to 'be' a teacher and to engage in the act of 'teaching'. At the same time, neoliberal and managerial approaches to education have taken hold in most developed countries, underpinned by the twin concepts of human capital and market fundamentalism, and these approaches have sought to portray educational practice as evermore

simple, quantifiable, and straightforward. In the first decade of the twenty-first century, Marilyn Cochran-Smith wrote of teaching:

> *Teaching is unforgivingly complex.* It is not simply good or bad, right or wrong, working or failing. Although absolutes and dichotomies like these are popular in the headlines and in campaign slogans, they are limited in their usefulness. … They ignore almost completely the nuances of "good" (or "bad") teaching of real students collected in actual classrooms in the context of particular times and places. They mistake reductionism for clarity, myopia for insight. (Cochran-Smith 2003, p. 4, emphasis in original)

It could be argued that in the ensuing 13 years, the reductionism and myopia have only gone from strength to strength. The ever-increasing desire to hold teachers, like other professionals, accountable for their practice (and here I do not mean in the sense of Onora O'Neill's (2002, 2013) notion of 'intelligent accountability', but rather something more sinister, perhaps akin to the evil twin of responsibility) has driven attempts at standardising and 'guaranteeing' practice. From the scripted lessons that form part of the Common Core in the United States (Endacott et al. 2015) to Australia's ongoing flirtation with Direct Instruction (Rennie 2016) to the proliferation of the 'what works' agenda and the hijacking of the notion of 'evidence-based practice' in England (Biesta 2007, 2010), we see ever more ingenious attempts to 'lock down' educational practice and pursue certainty in this increasingly complex realm.

The proliferation of teaching (or worse, teach*er*) standards is further evidence of this pursuit of certainty. Teachers working in most jurisdictions touched by the *Global Education Reform Movement* (GERM) (Sahlberg 2014) find their work described and neatly represented in a set of 'standards'. Standards are variously claimed to make explicit good teaching practice, to raise the profile and status of the teaching profession, to support teacher learning and development and so on. Individual nuances notwithstanding, common to most professional teaching standards, are a depiction of teachers' work that is largely hollow and technicised, that denies the importance of what Raewyn Connell (2013, p. 104) has termed "encounter" in the shaping of practice, and that assumes that good teaching can be neatly categorised and catalogued. Groundwater-Smith reminds us that

> A distinction needs to be made between that which is complex and issues that are complicated. The former is, as Black & Wiliam put it, messy, contingent and fragile (2003, p. 635). The latter is finite and capable of being unravelled and tidied up. In effect, schooling can never be 'tidied up'. We must learn to live with its dynamic and organic nature. (Groundwater-Smith 2005, p. 1)

In their essence, teaching standards regard the standardisation of practice as a desirable way to mitigate against its human and contextual messiness, to 'tidy up' schooling insofar as the messiness relates to teachers and their practice. Standards posit a simple solution to this messiness in the idea that individual components of teaching practice can be decontextualised and adjudicated as either 'good' or 'bad', reminiscent of Cochran-Smith's argument, with evidence assembled to substantiate these claims.

However, as demonstrated in a myriad of ways in the chapters in this book, teaching practice, like other educational practices, is always contextual, subject to a great many factors that sit around and impact on the practices employed by the teacher. As Susan Groundwater-Smith and I recently expressed it, "to posit that good teaching practice exists and can be quantified in a vacuum, decontextualized from students, is a nonsense" (Mockler and Groundwater-Smith 2015, p. 30). Additionally, teaching standards are invariably presented as a simple answer to the relentless complexity of the 'problem' of educational practice. Such simplicity neatly elides the reality that the search for improvement of teaching practice "relies on a deep understanding of context, well-honed and utilised professional judgement, and endless engagement in professional dialogue and discourse based on the problematisation of practice" (Mockler and Groundwater-Smith 2015, p. 30). Professional standards, posed as a solution to the complexities of practice, undermine each and every one of these.

To date, much has been written about professional standards and other tools of 'audit cultures' (Power 2003) in education, although it seems to me that we are yet to get real purchase on the impact of these regimes on the teaching profession. Power himself paints a somewhat disturbing picture of the generic 'auditee', wrapped in the "melancholic embrace" (Taubman 2009, p. 150) of the tools of audit:

> …she is skilled at games of compliance but exhausted and cynical about them too; she is nervous about the empty certificates of comfort that get produced but she also colludes in amplifying audit mandates in local settings; … she hears the rhetoric of excellence in official documents but lives a reality of decline;…she knows public accountability and stakeholder dialogue are good things but wonders why, after all her years of training, she is not trusted as an expert anymore. (Power 2003, pp. 199–200)

The 'auditee' has, along with those doing the auditing, lost faith in her professional judgement, is in danger of confusing compliance with performance and, no doubt, feels her actual practice shifting in alignment with the new arrangements within which it is enacted. There is, perhaps, a little of 'the auditee' in all of us who seek to survive in the age of compliance in which we find ourselves, particularly within the modern university.

Despite falling somewhat out of fashion in the age of compliance, teacher professional judgement remains a critical part of educational and, specifically, teaching practice. Judgement is only required, however, in circumstances where practice cannot be reduced to measurable, quantifiable chunks, where checklists can be constructed of 'objective', observable elements. Peter Taubman highlights the vulnerability of professional judgement under audit when he writes: "it seemed as though valuable, although perhaps vulnerable, professional judgement and wisdom were being replaced by a measurable, defendable, and supposedly neutral process in which educators and students were themselves constructed in terms of quantifiable outcomes" (Taubman 2009, p. 89). Without well-honed professional judgement, and well-placed confidence in their judgement, teachers themselves become vulnerable to audit cultures. When standards or quantifiable outcomes appear to provide precise, objective measures of practice, compared to the relatively subjective and unreliable mechanism of applying judgement, practice has

the capacity to be recast and reconstructed as simple rather than complex. When standardised test scores are used as a proxy in the public space as well as within the school for teacher quality, practice is vulnerable to being recast and reconstructed as simple rather than complex. Furthermore, a teaching profession de-professionalised by audit, alienated from its own judgement runs the risk of actually buying into, and itself promulgating, this fiction.

Lawrence Stenhouse pointed to the power of professional judgement, and by association to the 'danger zone' in which we now find ourselves when he wrote

> The essence of emancipation, as I conceive it, is the intellectual, moral and spiritual autonomy which we recognise when we eschew paternalism and the rule of authority and hold ourselves obliged to appeal to judgement. Emancipation rests not merely on the right of a person to exercise intellectual, moral and spiritual judgement, but upon the passionate belief that the virtue of humanity is diminished in man (sic.) when judgement is overruled by authority … *every overruling of judgement diminishes civilization; and the most civilized state is that in which the citizens are successfully trusted with the responsibility of judgement.* (Stenhouse 1978, p. 1, my emphasis)

We can use Stenhouse's perspective on the relationship between emancipation and judgement and the consequences of the overruling of judgement as a lens through which to view the costs of the 'audit explosion' in education. It is not difficult to see that in this environment of low trust, where the 'rule by authority' of audit is strong, we are unlikely to realise the aims of education, which might be thought of as "education for living well" on the individual scale and "education for a world worth living in" on a collective scale (Kemmis et al. 2014, p. 27). Through its attack on the human messiness and 'encounter' implicit in good education, of which professional judgement is an inalienable part, audit undermines the project of education as advancement of the good for each person, while through its persistent desire to relentlessly quantify and count and its reduction of education to the quantifiable and countable, it undermines the project of education as advancing the good for humankind. Indeed, this observation is not limited to the context of education: we might see parallels in many other realms of professional practice, where the 'encounter' dimension is undermined by audit, to the detriment of both individual and communal 'goods'.

While all of this might be seen to paint a fairly gloomy picture, the practice theory presented and utilised in this book provides a means by which educators and other practitioners might 'speak back' to the current situation and even find some channels for resistance. The theory of practice architectures draws on the notion of site ontologies (Schatzki 2005), holding that "practices are always located in particular sites and particular times" (Kemmis et al. 2014, p. 33). This notion provides us with a means of understanding practice as locally constituted and exploring the local nuances of practices enacted across different contexts and times, even (and perhaps especially) when the dominant discourses surrounding those practices suggest that there is a 'best' variant that can and should be simply replicated without concern for context. We find here a collection of papers that individually and collectively form an enormously useful resource for working 'against the grain' with regard to professional practice in an age of 'best practice'. Through the lens of

praxis, the authors remind us of what is possible: the portraits drawn here across a range of professional practice contexts might be thought of as simple acts of thoughtful subversion, grounded in 'practical theory'.

The theory of practice architectures, understanding that practices, comprised of 'sayings', 'doings' and 'relatings', 'hang together' in 'projects' that encompass intentions, actions, and imagined ends, provides a resource that is at once *theoretical* and *practical* for thinking through, coming to understand, and deconstructing practice. As Kemmis et al. (2014) note,

> The theory of practice architectures contributes a new way of understanding the doubleness of educational practices, and the particular cultural-discursive, material-economic and social-political arrangements that hold particular educational practices in place – that is, education as it happens in actual local sites. (p. 37)

In educational and other institutions and organisations, there exist enabling and constraining conditions for different kinds of practices, and these necessarily cut across cultural-discursive, material-economic, and social-political arrangements of the 'site'. We do far better to understand these enablers and constraints and give due consideration to their conditions of creation and enactment than to engage in the elusive search for 'best practice', a quest which so often seeks to reduce the complexity of the education enterprise to blunt instruments such as effect size or 'months gained' (see, e.g., Education Endowment Foundation 2016).

If there really is "nothing so practical as a good theory", then the theory of practice architectures, employed by the contributing authors in this book, is a 'practical theory' for our time. The authors demonstrate the utility and illumination offered by the theory across diverse educational settings, including primary classrooms, teacher professional learning and development, educational leadership, nurse education, vocational education and training, and higher education practice. They provide us with models and resources for theorising practice, for embracing the glorious complexity of educational practice, and for appreciating the local and more general conditions that make different kinds of practice possible. Across these settings, we find a common thread of hope: the authors share the hope that education and professional practice can be transformed, for the good of individuals and for the good of our society.

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Chapter 1
Introduction: Practice Theory and the Theory of Practice Architectures

Kathleen Mahon, Stephen Kemmis, Susanne Francisco, and Annemaree Lloyd

Abstract This chapter introduces the theory of practice architectures and locates it within the theoretical terrain of practice theory. It highlights what is distinctive about the theory as a practice theory, and discusses its affordances as a theoretical, analytical, and transformational resource for practitioners and researchers. We argue that, to create new possibilities for practice in our disciplines and professions, and/or to challenge unsustainable or untoward practices in education and professional practice more broadly, our current practices must be interrogated. The theory of practice architectures can inform such interrogative work. This chapter provides a foundation for the case chapters in this book which variously illustrate the kinds of insights yielded by exploring education and professional practice through the lens of practice architectures.

Practitioners all over the world frequently ask themselves as they go about their work, how can we do this better? How can we practise in ways that are more sustainable and just? What should we do differently to create new possibilities and opportunities? Questions about how to become a better practitioner, to practise in ways that

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are more sustainable, or to create new possibilities and opportunities, are an important part of the daily dialogue and reflections of practitioners. They are important questions asked in a world of professional practice made more complex by the highly technologised, globalised, and governed society of the twenty-first century. These questions are particularly important for education and our educational institutions, where justice and possibilities for human flourishing are sometimes undermined by, for example, economic imperatives, competing demands and external pressures, and harmful/unsustainable ideologies. The task of addressing such questions and transforming education and professional practice is a crucial ongoing responsibility and challenge for practitioners, researchers, and practitioner researchers alike. It is a task that requires many things, not least resources that allow us to understand our respective professional realities; to examine what shapes, sustains, and transforms our realities; and to respond appropriately, or 'speak back' to constraining and unsustainable conditions, whether we are experienced practitioners, professional leaders, practitioner educators, aspiring professionals, researchers, or policy makers.

The theory of practice architectures is such a resource. It is at once a *theoretical-resource* for understanding education and professional practice; an *analytical* (or methodological) *resource* for revealing the ways practices are enabled and constrained by the conditions under which they occur (and especially, we shall argue, the practice architectures that make them possible and hold them in place); and a *transformational resource* for finding ways to change education and professional practice, where current practices and conditions are untoward – i.e., they are unreasonable, unproductive or unsustainable, or the cause of suffering or injustice. In general, this book argues, the transformational aim of research using the theory of practice architectures emerges in research for *praxis*, both in the personal sense of helping participants in, or responding to, untoward situations decide how they might act *morally*, for the good of the persons concerned, and also *politically*, in the interests of the good for humankind.

So what is the theory of practice architectures? The theory of practice architectures is a contemporary account of social reality that focusses on practice. It is a practice theory (Schatzki 2001), a term which denotes a broad church of social and cultural theories related to each other by virtue of their fundamental concern with practice (Green 2009; Nicolini 2013). As a practice theory, the theory of practice architectures shares common ground with other practice theories. However, in some respects it has emerged through a process of problematising practice theory and offers a distinctive ontological view of what practice is, how practices are shaped and mediated, and how practices relate to each other. As we shall argue, the theory makes a unique contribution to the practice theory debate through the ways that it politicises practice, humanises practice, theorises relationships between practices, is ontologically oriented, and offers insights pertaining to education. This contribution is important given the take up of practice theory in recent decades by those hoping to further our understanding of, and create transformational possibilities in, education and professional practice more broadly.

Since the theory was first articulated by Stephen Kemmis and Peter Grootenboer (Kemmis and Grootenboer 2008) it has continued to evolve. It has undergone several iterations as Kemmis and Grootenboer and their colleagues have continued to

engage with it in their research work, and in their everyday practice and encounters with other scholars and theoretical resources (see Kemmis et al. 2012; Kemmis et al. 2014a, b; Kemmis and Heikkinen 2012; Kemmis and Mutton 2012; Ronnerman and Kemmis 2016). The ways in which the theory is being put to work in social inquiry has also been evolving as an increasing number of researchers are using the theory as a lens for examining practices in an expanding range of fields and disciplines. This includes vocational education (e.g., Brennan Kemmis and Green 2013); nursing (e.g., Hopwood et al. 2013); teacher mentoring (e.g., Kemmis et al. 2014a); pre-service teacher education (e.g., Hemmings et al. 2013; Sjolie 2014); higher education (e.g., Mahon 2014; Taylor 2012); early childhood education (Salamon et al. 2015); educational leadership (e.g., Bristol 2014; Edwards-Groves and Rönnerman 2012; Wilkinson et al. 2010; Salo et al. 2014); and professional learning in universities (e.g., Green et al. 2013; Hardy 2010a, 2010b). Of course, a variety of new studies exploring the theory are presented in this book.

In this chapter, we introduce it of practice architectures, and highlight what is distinctive and significant about it. We also discuss some of the analytical possibilities and transformational opportunities afforded by the theory. It is our hope that the discussion will be informative for those working with this theory, or contemplating doing so, whether for theoretical purposes, for empirical purposes, or for the purposes of practitioner reflexivity and self-inquiry, and/or changing education and professional practice.

The first part of the chapter sketches the theoretical terrain of practice theory more generally. This provides a backdrop for our subsequent explanation of the theory of practice architectures. There are a number of works that introduce, trace the history of, and/or provide in-depth discussions of, practice theory (e.g., Hager 2012; Nicolini 2013; Reckwitz 2002; Schatzki 2001, 2012; Shove et al. 2012[1]). In this chapter we defer to these previous accounts and provide only a brief introduction to the key themes, dimensions, and features of practice theory, focussing on aspects that are most salient for our discussion of the theory of practice architectures in the second and third parts of the chapter. The second part of the chapter explains the theory of practice architectures in its most recent form. Some of the key concepts and terms are given particular attention in this discussion, building on what has been written about the theory elsewhere (e.g., Kemmis and Grootenboer 2008; Kemmis et al. 2014b). An explanation of the theory of 'ecologies of practices' (Kemmis et al.

[1] Readers are encouraged to consult this work for a more comprehensive explication of practice theory. Nicolini (2013) has explored in detail the contribution of various theoretical and/or methodological traditions including cultural-historical activity theory (CHAT), ethnomethodology, actor network theory, discourse analysis, and traditions related to the work of Giddens, Bourdieu, Wittgenstein, Heidegger, and Schatzki. Reckwitz (2002), in contrast, has located practice theory in relation to other cultural theories (mentalism, culturalism, and intersubjectivism). Schatzki (2001) provided an historical account of practice theory as an introduction to an edited collection of chapters exemplifying his notion of a 'practice turn'. Other authors have provided a brief history of practice theory as a way of locating their own philosophical/empirical work, shedding light on, or critiquing, the contributions and relevance of practice theory to their fields (e.g., Feldman and Orlikowski 2011; Corradi et al. 2010); and/or contextualising their arguments (Green 2009; Shove et al. 2012).

2012) is included. The aim of this discussion is to lay the theoretical groundwork for the case chapters in this book. The third part of the chapter locates the theory of practice architectures within the practice theory terrain and outlines some key affordances of the theory. As part of the discussion we highlight points of convergence and divergence with other practice theories, and discuss ideas that the theory reacts against. We view such a contextualisation of the theory as key to a critical reading, and to critical use, of the theory. (Chapter 13 provides a more comprehensive discussion of the evolution of the theory of practice architectures in relation to other practice and social theories).

We close the chapter with an explanation of how the book is organised. We introduce some of the themes that shape the book's unfolding, and invite readers to join us on a journey into the work and ponderings of researchers exploring education and professional practice in a variety of settings through the lens of the theory of practice architectures.

Before proceeding, we should say a word about what we mean by 'professional practice'. We regard professional practice as socially- and ethically-informed practice in various professional (and occupational) fields; it is 'professional' not only by virtue of being linked to specific occupations, but also because it is conducted in the manner that, in ordinary language, we describe as 'professional'. In what follows, we explore 'practice' in more detail. We should also say that chapters in this volume generally consider various kinds of 'educational' practice. This focus reflects the research and affiliations of the authors represented in the volume. We nevertheless believe that much of what is said about professional practice in the volume is relevant to practice in other fields.

The Theoretical Terrain of Practice Theory

A 'practice turn' (Schatzki 2001) has been shaping, or is being experienced, in many areas of the social sciences. This turn represents a "prioritisation of practices" (Schatzki 2001, p. 11) in endeavours to understand and critique social reality. Practice theory provides lenses which make examination of practices possible, and in doing so enables useful accounts of how practices happen, how they are mediated, and their role in the constitution of social life.

Although the theories encompassed in the term *practice theory* are multiple and diverse (Nicolini 2013; Schatzki 2001), as Nicolini (2013) noted, they converge in terms of their treatment of social practices as a "starting point for theorizing human affairs" (p. 162). Commonly located under a practice theory umbrella is the work of Garfinkel (1967), Giddens (1976, 1979, 1984), Foucault (1976; 1980), Bourdieu (1977; 1990), MacIntyre (1981), Taylor (1985), Lave and Wenger (1991), Schatzki (1996, 2001, 2002, 2012), Bourdieu and Wacquant (1992), and Latour (2005). More recent practice theory work has been done by authors such as Gherardi (2006, 2009), Hager et al. (2012), Lloyd (2010), Green and Hopwood (2015), Reckwitz (2002), and, as we highlight in this chapter, Kemmis and colleagues.

It is possible to point to some common features and assumptions amongst the various practice theories. Practice theories are marked by an "interest in the 'everyday' and 'lifeworld'" (Reckwitz 2002, p. 244) and share a basic tenet that practices are situated, social, and relational. Many practice theorists subscribe to the view that inherent within practices are patterns of activity and understandings that are critical in, and shape, human life (Reckwitz 2002; Schatzki 2012). Practice theorists generally recognise the importance of material things and materiality as well as communication and text/symbols in the constitution of practices (Reckwitz 2002). They also reject dualisms (Bourdieu and Wacquant 1992; Feldman and Orlikowski 2011; Reckwitz 2002) – such as mind and body, structure and agency, and cognition and action – and recognise non-propositional knowledge as not only important, but also embodied and enacted within/through practice (Schatzki 2002). While on the one hand they assert that we know more than we can say, they also assert that what we do typically means more than we know. Crucially, practices tend to be favoured by practice theorists – for instance, over individuals or mental structures and processes (Reckwitz 2002) – as the primary subject of analysis for examining social relations (Nicolini 2013; Shove et al. 2012).[2]

Despite these general commonalities, there is no unified theory of practice (Corradi et al. 2010, p. 267) or practice approach (Schatzki 2001). Indeed, the theoretical terrain of practice theory is a complex and unsettled one (Feldman and Orlikowski 2011), partly because practice theory has been informed by several evolving intellectual traditions. Practice theories vary widely in terms of how practice is defined and, relatedly, what counts as practice (Nicolini 2013). Differences also exist in relation to what is foregrounded in accounts of practice. Some theories draw attention to discursive dimensions of practices, while other theories emphasise power and the political, moral dimensions and consequences of practice, or historical occurrences.[3]

The extent to which practice theorists take a more ontological or epistemological approach to practices is another point of difference between practice theories. When practices are treated ontologically, practice theorists attend to the specific content and conduct of practice, its organisation in space and time, the arrangements that make it possible and hold it in place, its transformation, and the sites in which it happens (e.g., Schatzki 2002).[4] Schatzki's (2002) site ontology exemplifies this well through attention paid to practice as the "primary generic social thing" (2001, p. 1), and a focus on enactment of social life as it transpires through the nexus of "practice and material arrangements" (Schatzki 2005, p. 471). When practices are treated

[2] Mental processes are not ignored. Rather they are treated as embedded "in a complex of doings" (Reckwitz 2002, p. 258).

[3] For examples of some of these differences, see Nicolini's (2013) comparison of MacIntyre and Wenger (pp. 9–10) or Kemmis's (2010b) table outlining the key features of practice as identified by various intellectual traditions.

[4] The ontological nature of practice theories has been acknowledged by Nicolini (2013), although his own work has a distinctive epistemological focus (see for example, Gherardi and Nicolini 2000a, 2000b; Nicolini et al. 2003).

epistemologically, practice theorists focus more systematically on, for instance, practical knowledge and learning/knowing processes (i.e., what and how people come to know in a practice). Lave and Wenger's (1991) notions of 'legitimate peripheral participation' and 'situated learning' are illustrative of such an orientation. Gherardi and Nicolini's (2000a, 2000b) work on how knowledge emerges and/or is constructed in relation to workplace safety practices is a further example. Some practice theories address both epistemological and ontological questions, seeing practices as both the locus of learning and knowing (Fenwick 2012; Sjølie 2014) and constitutive of social life. More is said about this in our discussion of the theory of practice architectures later in this chapter.

Another point of divergence is the status ascribed, or attention drawn, to materiality or material artefacts (e.g., tools, texts, technologies, furniture, office spaces, diseases, rain, signs) in shaping and constituting practices. Some practice theories, for instance, reflect a perspective best described as 'sociomaterial' – one which embraces a range of perspectives, but that generally foregrounds materiality and positions material artefacts and activity as enmeshed or entangled (Hodder 2012) rather than as discrete elements that are co-constituted (Orlikowski 2010). Some theories, such as actor network theory go so far as to de-centre human agency and describe the agency of non-human elements (see Latour 1996, 2005). This contrasts with perspectives that stress the role of non-human entities in practice without ascribing them status as agents (e.g., Schatzki 2002).

The differences between practice theories stem largely from their roots in varying scholarly traditions (Nicolini 2013) and the influence of a range of theorists and philosophers who are not necessarily regarded as practice theorists themselves. Aristotle, for instance, has been influential in terms of his conceptualisation of praxis (as distinct from epistēmē and technē), and attention to the moral dimensions of what we now call 'practice'. Marx left an indelible mark on practice theory, materialising Hegel's idealist view of progress through history by showing how material practices (like divisions of activities between workers and owners) formed and secured patterns of social relationships (like class divisions in a society). There are traces of Marx's work in practice theories that highlight the materiality of practice (Shove et al. 2012), and the 'history making' dimension of practice.

Several contemporary writers have also paid homage to Wittgenstein and Heidegger (see Feldman and Orlikowski 2011; Green 2009; Nicolini 2013; Reckwitz 2002; Schatzki 2002; Shove et al. 2012), and to pragmatists such as Dewey. Wittgenstein's and Heidegger's work have been particularly influential in relation to the notion of intelligibility. Wittgenstein (1957), while not specifically attending to an account of practice, recognised that human activity is rendered meaningful within social practices. He suggested that practice acts as the site and source of intelligibility and understanding, structuring human action. Heidegger (1962) meanwhile provided an influential account of *Dasein*, or being in the world, and recognised practice as a site and source of meaning through action and reflexivity. Dewey, in contrast, has been acknowledged for his attention to embodied knowledge and experience in the transformation and continuity of habits and routines (see Green 2009; Schatzki 2002; Shove et al. 2012).

Contemporary practice theory has also been influenced by writers who have provided more explicit accounts of practice relative to those just mentioned. Among these are Garfinkel (1967), Bourdieu (1977, 1990), Foucault (1976, 1980), Giddens (1979, 1984), MacIntyre (1981), Taylor (1985), and Engeström (1999). More is said about some of their contributions in Chapter 13 of this book.

The ideas about practice emerging from the work of such theorists and philosophers have been challenged and extended in more recent writing about practice theory, notably in the work of Schatzki (2002), with his ontological perspective of practices as 'sites of the social'. Other contemporary practice theorists making influential contributions to the field of practice theory include Reckwitz, Lave and Wenger, Gherardi, and Nicolini. Reckwitz (2002) introduced the idea that individual agents are "carriers" of a practice (p. 252) and Lave and Wenger (1991) have introduced the notion of "communities of practice" (p. 49). Gherardi (2006) and Nicolini's (2011) work on relationships between knowing (or knowledge) and practice has also provided important contributions, for instance, in relation to the building industry in Gherardi's case, and in relation to telemedicine in Nicolini's case.

Practice theories are now being used as lenses for examining social life and social phenomena in an increasing range of fields, some of which overlap, including education (e.g., Kemmis et al. 2014b); organisational studies (e.g., Feldman and Orlikowski 2011; Gherardi 2006, 2009; Nicolini 2011; Price et al. 2009), information studies (e.g., Lloyd 2010), health services (e.g., Hopwood 2014), consumer culture (e.g., Butler et al. 2014; Hargreaves 2011), and professional practice and learning (see Fenwick 2012; Green 2009; Green and Hopwood 2015; Hager et al. 2012). This array of fields may be contributing to the diversity in contemporary practice theory and approaches to practice theory, since each field or discipline potentially yields its own context-specific theoretical insights. The growing body of work to which these and many other authors are contributing is helping to shed light on a multitude of issues from the use of technology in the workplace (e.g., Orlikowski 2007) to knowing in telemedicine practice (e.g., Nicolini 2011); from group learning (Hager 2013) to partnership and accountability in health services (e.g., Hopwood 2014); and from energy consumption in households (e.g., Butler et al. 2014) to transforming education for the twenty-first century (Kemmis et al. 2014b).

The theory of practice architectures is both a practice theory and a response to the field of practice theory that we have briefly mapped out here. We elaborate on how this is so in the last part of this chapter. At this point, a detailed explanation of the theory is warranted, and it is to such an explanation that we now turn.

The Theory of Practice Architectures: A Site Ontological Perspective on Practices

The theory of practice architectures is an account of what practices are composed of and how practices shape and are shaped by the arrangements with which they are enmeshed in a site of practice. A *practice* is understood as a socially established

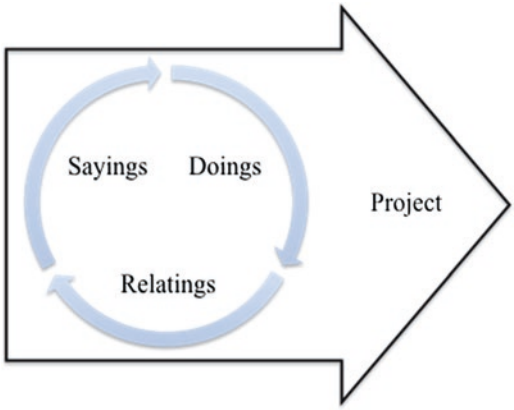

Fig. 1.1 Practices are composed of sayings, doings, and relatings that hang together in projects. From Kemmis et al. (2014b, p. 33) (Copyright 2014 by Springer Science + Business Media Singapore. Reprinted with permission from Springer)

cooperative human activity involving utterances and forms of understanding (sayings), modes of action (doings), and ways in which people relate to one another and the world (relatings) that 'hang together' in characteristic ways in a distinctive 'project' (adapted from Kemmis and Brennan Kemmis 2014, April). Figure 1.1 shows this relationship. The *project* of a practice encompasses (a) the intention (aim) that motivates the practice, (b) the actions (interconnected sayings, doings, and relatings) undertaken in the conduct of the practice, and (c) the ends the actor aims to achieve through the practice (although it might turn out that these ends are not attained) (Rönnerman and Kemmis 2016). For instance, when a teacher is engaged in the practice of teaching, one of the projects is very likely the support of student learning.

The notion that sayings, doings, and relatings 'hang together' in a practice is important since sayings, doings, and relatings can occur independently of practices (Kemmis et al. 2014b, p. 26). In practices, particular kinds of relevant sayings, doings, and relatings are harnessed together in some kind of coherent way in the pursuit of the project of the practice (Kemmis et al. 2014b, p. 26). This is not necessarily without tension or contradiction. How they hang together is what gives particular kinds of practices their distinctiveness. Moreover, that the sayings, doings, and relatings that comprise practices *happen together* means that practices cannot be reduced to any one of these actions on its own. To say these things "happen together" in the abstract is not very interesting; to those developing the theory of practice architectures, the interesting question is how some particular sets of sayings (language) come to hang together with a particular set of doings (in activity, or work), and a particular set of relatings (e.g., particular kinds of power relationships, or relationships of inclusion or exclusion). Thus, for example, an analyst of practices might explore how a particular activity like 'streaming' classes (grouping students into different classes on the basis of their ability or measured IQ) is justified by the particular sayings (e.g., using discourses of ability or intelligence), and the resulting social consequences for the students involved (e.g., social distinctions and exclusion between groups).

The theory of practice architectures holds that practices are social phenomena, and, as such, are located in circumstances and conditions that occur in particular locations in physical space-time, and in history. Adopting Schatzki's (2002, 2003, 2005, 2006, 2012) notion of 'site ontology', the theory of practice architectures suggests that practices are always situated (i.e., they happen) within a *site* or *sites* (Schatzki 2002). The site of a practice is "that realm or set of phenomena (if any) of which it is intrinsically a part" (Schatzki, 2003, p. 176). Practices, from a site ontological perspective, can be located in multiple sites at one time, and one practice can be the site of another practice (Schatzki, 2002). For example, teaching practice can be the site of assessment practice.

Being social and situated, practices are not just shaped by the experience, intentions, dispositions, habitus, and actions of individuals (Kemmis et al. 2012, 2014b; Kemmis and Grootenboer 2008). They are also shaped and prefigured intersubjectively by *arrangements* that exist in, or are brought to, particular sites of practice. In other words, practices are shaped and prefigured by arrangements "that exist beyond each person as an individual agent or actor" (Kemmis and Grootenboer 2008, p. 37). This is to say that a practice extends beyond what the individual enacting a practice brings to a site as a person (e.g., beliefs, physical attributes, and abilities); it also encompasses arrangements found in or brought to the site, arrangements with which the individual interacts, and without which the practice could not be realised.[5] Like the body of the person enacting the practice (practices are always embodied; Green and Hopwood 2015), these arrangements thus form a crucial part of the ontological ground that makes a practice possible.

The theory of practice architectures identifies three different kinds of arrangements that exist simultaneously in a site of practice.[6] These are cultural-discursive arrangements, material-economic arrangements, and social-political arrangements:

Cultural-discursive arrangements are the resources (in the broad sense of the word) that prefigure and make possible particular *sayings* in a practice, for example, languages and discourses used in and about a practice (Kemmis et al. 2014b, p. 32). They can constrain and/or enable what it is relevant and appropriate to say (and think) in performing, describing, interpreting, or justifying the practice (p. 32). In the case of teaching practices in a secondary classroom, for instance, cultural-discursive arrangements might include specialist discourses associated with particular disciplines (e.g., Mathematics, History), the language shared by

[5] Referred to in Kemmis and Grootenboer (2008) as "extra-individual conditions" (p. 37) to distinguish these arrangements from conditions brought to a practice by the person doing the practice.

[6] This is a point of divergence between the theory of practice architectures and the work of Schatzki (2002). Rather than specifying three different kinds of arrangements that prefigure practice, Schatzki (2005) referred to such arrangements using a more general term: *material arrangements*. Following Wittgenstein (1957), Schatzki (1996, 2002) refers frequently to the 'sayings' and 'doings' that compose practices; the theory of practice architectures makes the 'relatings' of a practice explicit and prominent (rather than leaving them implied), because, as we discuss later, they point towards the dimension of solidarity and power that also permeates practices.

the teachers and students (e.g., English, Finnish), or tacit codes about the level of formality appropriate for classroom conversation.

Material-economic arrangements are resources (e.g., aspects of the physical environment, financial resources and funding arrangements, human and non-human entities, schedules, division of labour arrangements), that make possible, or shape the *doings* of a practice by affecting what, when, how, and by whom something can be done. Again taking secondary school teaching practice as an example, material-economic arrangements shaping a teacher's classroom doings might include the classroom furniture and layout, audio-visual equipment, the timetable, access to support staff, student-teacher ratios, and teachers' employment contracts.

Social-political arrangements are the arrangements or resources (e.g., organisational rules; social solidarities; hierarchies; community, familial, and organisational relationships) that shape how people relate in a practice to other people and to non-human objects; they enable and constrain the *relatings* of a practice. Secondary teachers' ways of relating to students in their practice, for example, might be shaped by such arrangements as their position within the school staffing structure, their familiarity with the students, and/or codes of teacher conduct as specified by their school or employer.

Practices are thus always enmeshed[7] with the cultural-discursive, material-economic, and social-political arrangements that occur in (or are brought to) a particular site. One might say that practices are thus 'anchored' in these arrangements in a site, but the metaphor of 'anchoring' may suggest too stable and secure a relationship between a practice and the arrangements in a site.[8] To say that practices are 'enmeshed' with arrangements in a site recognises the fluidity and volatility with which practices engage with the particularities of arrangements in sites, and also recognises the variation, improvisation, and innovation with which practices are enacted – variation, improvisation, and innovation which are observable in the enactment of practices in everyday life.

Speaking of sayings, doings, and relatings in relation (respectively) to the cultural-discursive, material-economic, and social-political arrangements present in or brought to sites is not an arbitrary choice. On the contrary, the theory of practice architectures posits the social world as composed in three dimensions, specifically, "three dimensions of intersubjectivity" (Kemmis et al. 2014b, p. 23). Cultural-

[7] Schatzki (2012) described the relationship between practices and material arrangements in terms of *bundling*. He depicted sites as "bundles" of practices and "material arrangements" (2012, p. 16). He used the word 'bundle' to reflect the inseparability of practices (e.g., teaching practice) and material arrangements (e.g., classrooms arrangements) within a site: "practices affect, use, give meaning to, and are inseparable from arrangements while … arrangements channel, prefigure, facilitate, and are essential to practices" (2012, p. 16). Kemmis and colleagues, in contrast, use the term *enmeshment* in preference to 'bundling' when describing the relationship between practices and arrangements, and reserve their use of the word 'bundle' and its variants for describing how sayings, doings, and relatings 'hang together', or how arrangements 'hang together'.

[8] Swidler (2001), for example, uses the notion of cultural practices being anchored and anchoring. See also Schatzki (2012).

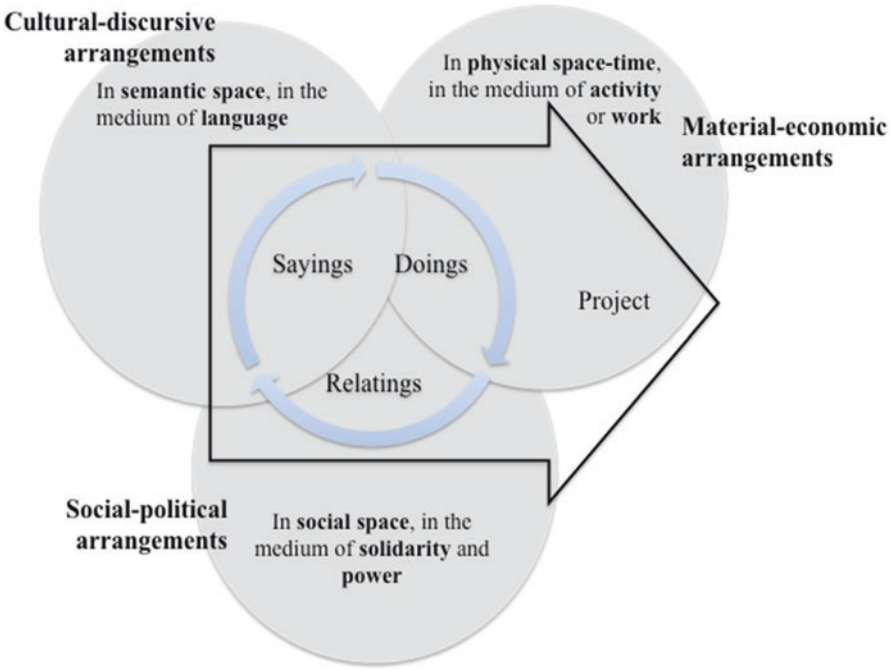

Fig. 1.2 The media and spaces in which sayings, doings, and relatings exist. From Kemmis et al. (2014b, p. 34) (Copyright 2014 by Springer Science + Business Media Singapore. Reprinted with permission from Springer)

discursive arrangements are realised in *semantic space*, where people encounter each other intersubjectively "in the medium of language" (Kemmis et al. 2014b, p. 32). Material-economic arrangements are realised in *physical space-time*, where people encounter each other intersubjectively, as bodies, "in the medium of activity and work" (Kemmis et al. 2014b, p. 32). Social-political arrangements are realised in *social space*, where people encounter each other intersubjectively "in the medium of power and solidarity" (Kemmis et al. 2014b, p. 32). However, as noted in Kemmis et al. (2014b),

> …in these three dimensions, cultural-discursive, material-economic and social-political arrangements do not occur separately from one another; they are always bundled together in practice and in places. Bundled together, they give social life – and our consciousness of it – its apparent solidity, its palpability, its reality and its actuality. (p. 5)

Figure 1.2 represents these three dimensions and their relationship to practices.

The cultural-discursive, material-economic, and social-political arrangements that together shape or prefigure a particular practice are referred to as the *practice architectures* (Kemmis and Grootenboer 2008, p. 57) of that practice. Every practice has its own site-specific *practice architectures.* These are the pre-conditions that make practice possible and hold it in place, prefiguring (Schatzki 2002, p. 44) the unfolding of the practice. In other words, they are mediating conditions necessary but not sufficient for the enactment of the practice.

While practices are mediated by practice architectures, practice architectures are also mediated by practices. The following explanation of how practices shape the practice architectures for other practices highlights the complex, mutually-constitutive relationship between practices and practice architectures:

> [Practices leave] behind in the setting particular kinds of discursive, physical and social traces or residues of what happened through the unfolding of the practice. These traces or residues are left not only in participants' memories and interactional capacities but also in the practice itself as a site for sociality. Some of these residues become part of the practice architectures of the setting and are newly encountered by others who subsequently inhabit it – for example, when tomorrow's class discovers where the chairs were left in the classroom by today's students, or when new contributors to a debate in the research literature of a field find that the field has 'moved on' from the debates of earlier years. (Kemmis et al. 2014b, p. 29)

Rather than being fixed or stable, practice architectures evolve in response to various kinds of natural and social forces, and through human intervention (Kemmis et al. 2014b, pp. 4–5), including through practitioners' ongoing individual and collective practice. Kemmis (2009) argued that some practice architectures

> have the weight of living and consciously remembered traditions of thought and action justifying them; some stay the same over time merely by habit; some are kept in their course by coercion or ideology; some are kept in place by rules and sanctions, by regulation and compliance mechanisms. (p. 34)

So, while the practice architectures that enable and constrain a particular practice are often already at hand in a site, new practice architectures can also be brought to, created in, and/or reconstituted in a site, prefiguring the practice in new, adapted, innovatory, or otherwise transformed ways. Such a notion has implications for those wishing to change practices since it signals the role and importance of human *agency* in the transformation of practice conditions.

As suggested by Kemmis's (2009) words just quoted, practice architectures can also be understood in terms of *practice traditions*. Practice traditions "encapsulate the history of the happenings of the practice, allow it to be reproduced, and act as a kind of collective 'memory' of the practice" (Kemmis et al. 2014b, p. 27). They carry the imprints of prior sayings, doings, and ways of relating enacted in a practice. In this way, the practice traditions of a practice form part of the practice architectures for that practice (and perhaps other practices). A 'schooling' practice tradition that has been reproduced over centuries is the delivery of instructions in a classroom from the 'front' of the room. The residues of this age-old practice are still visible, for example, in the way many modern classrooms are arranged with chairs and desks facing a wall furnished with a whiteboard or screen and 'teacher's desk' signifying the classroom 'front'. Conversely, the practice architectures of a practice are frequently embedded in practice traditions (as happens in the case of the enduring, established practices of a profession). The practice tradition of 'schooling' itself, at least from a western-European perspective, is characterised by recognisable cultural-discursive, material-economic, and social-political arrangements. The very idea of a 'classroom' as a designated place of teaching and learning has a firm place in this tradition, it would seem.

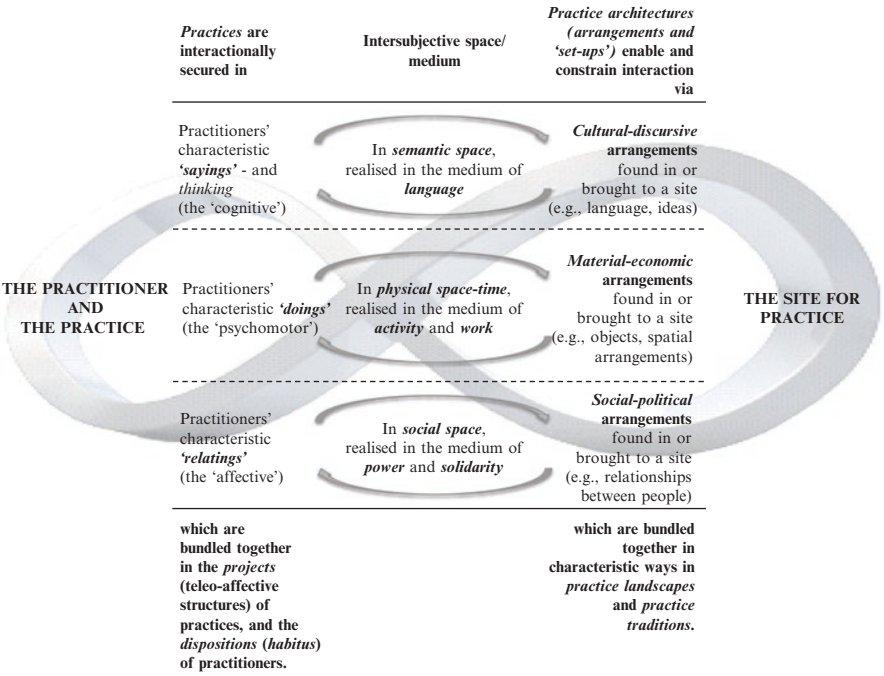

Fig. 1.3 The theory of practice architectures. From Kemmis et al. (2014b, p. 38) (Copyright 2014 by Springer Science + Business Media Singapore. Reprinted with permission from Springer. Note that the word 'practitioner' on the left hand side of the diagram denotes participants in a practice in a general sense rather than participants in a professional practice specifically. Practitioner, in this more general sense does not exclude babies, for example, if we happen to be talking about the practices of babies (as Salamon does in Chapter 5 of this book))

The way in which practice traditions, practices, practitioners, practice architectures, and sites of practices interrelate in the three dimensions of intersubjectivity is represented diagrammatically in Fig. 1.3. The diagram highlights the dialectal relationship between practitioners and practice architectures through the use of the infinity symbol (∞). The symbol is intended to be read as a kind of flow, holding together bundled-together sayings, doings, and relatings, on the one side, with, on the other, the cultural-discursive, material-economic, and social-political arrangements that make them possible. To Kemmis, the infinity symbol also has a deeper meaning, evoking this famous sentence from Marx's (1845) third thesis on Feuerbach:

> 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 himself [or herself] be educated.

In Kemmis's view, the left loop of the infinity symbol in the diagram (Fig. 1.3) embraces the individual who enacts a practice (the person who is the product of circumstances and upbringing, who can change circumstances, and who must be educated), while the right loop embraces the site in which the arrangements together form the practice architectures for the practice (which are the historical circumstances that

both form people and can be changed by people). In a true dialectical relationship, like the relationship of the chicken and the egg, each proceeds from the other.

Importantly, the theory of practice architectures takes into account the notion that practice may be enacted as *praxis*. In the theory of practice architectures, this contested construct is represented as a special form of practice. The term is used in both a neo-Aristotelian sense to denote "action that is *morally-committed, and oriented and informed by traditions in a field*" (Kemmis and Smith 2008, p. 4) and in a post Hegelian and post Marxian sense to denote "history making action" (Kemmis 2010a, p. 9). Praxis, which can be enacted by people individually or collectively, involves acting in ways that are morally, ethically, and politically responsible, and acting with awareness that when we act, we are acting in history, changing the world around us, even if only in small ways. Reference to both *practice* and *praxis* in the theory of practice architectures acknowledges that practices have a moral, not just a technical dimension. Practices always have consequences; the unfolding or anticipation of these consequences inform the conduct of the practice. Because moral consequences of a practice are site- and situation-specific, many practice situations demand moral-ethical judgement and creative problem solving, rendering reliance on prescribed procedures or rule-following action inappropriate. The emphasis on practice as praxis is elaborated in the final part of this chapter.

That practices have cultural, material, moral, social, and political consequences is highly relevant to the question of the relationships that exist between practices, since the effects and consequences of one practice can shape other practices. This brings us to the theory of the *ecologies of practices* (Kemmis et al. 2012), an extension of the theory of practice architectures. The notion of ecologies of practices is an account – based on ecological concepts drawn from Capra (1997, 2004, 2005) – of how practices can come to relate to each other in social sites. The theory holds that practices do not exist in isolation from other practices. Rather, they are "like living entities" that can be ecologically related to each other; they sometimes "coexist" in complex ecologies or webs of practices that are "like living systems" (Kemmis et al. 2014b, p. 41).[9] It is an empirical question whether or not one practice is in a relationship of interdependence with another practice, not an abstract idea. In the same way that living entities can become interdependent, so too can practices, for example, when the product or outcomes of one practice "are taken up in other practices" (Kemmis et al. 2012, p. 34). Furthermore, practices can adapt and evolve in relation to, and be constrained and enabled by, each other. This means that practices can become practice architectures for other practices; see Kemmis et al. (2014b) for a substantive, empirically-based account of interdependent relationships between five educational practices that comprise what the authors refer to as the 'education complex': learning practices, teaching practices, professional learning practices, leading practices, and researching, where researching practices include "self-study on the part of teachers and administrators" (p. xi).

Practices, practice architectures, and practice traditions are not only said to exist in, and comprise, sites of practice and ecologies of practices. They are also described

[9] For a more detailed elaboration of the theory of ecologies of practices see Kemmis et al. (2012).

as being enmeshed with each other in particular ways in *practice landscapes* (Kemmis et al. 2014b, p. 4, 34). Following Schatzki (2010), the notion of practice landscapes refers to practice settings, such as early childhood centres, hospitals, TAFE Institutes, or schools, where multiple kinds of different practices occur, and in which there may be multiple and overlapping sites of practice.[10] From an ecological perspective, a practice landscape can sometimes be described as a *niche* for a particular practice when that landscape has the necessary practice architectures (conditions of possibility) in place for the practice to exist or to be sustained (Kemmis and Heikkinen 2012; Kemmis et al. 2014b). These and other key terms in the theory are summarised in Table 1.1.

So far in this chapter, we have provided a brief sketch of the theoretical terrain of practice theory, and an explanation of the theory of practice architectures itself. Next we bring the theory of practice architectures and practice theory together to provide a sense of what is distinctive about the theory of practice architectures as a practice theory, and what it contributes to ongoing conversations and projects concerned with practices, professional practice, and education.

What Is Distinctive and Significant About the Theory of Practice Architectures?

Like any substantive theory, the theory of practice architectures ought to be viewed in relation to the theoretical terrain to which it belongs and responds. With this in mind, in this section of the chapter, we locate the theory of practice architectures within the theoretical terrain of practice theory and highlight what is distinctive and significant about it as a theory of practice. Note that contextualisation of the theory is taken a step further in Chapter 13, where Kemmis and Mahon trace the theory's development and key influences.

The Theory of Practice Architectures and Practice Theory

There are some clear points of convergence between the theory of practice architectures and other practice theories, not least an emphasis on practices as a starting point for examining social reality, and theoretical borrowings from Aristotle and Marx, and work such as MacIntyre (1981), Schatzki (2002, 2010, 2012) and Giddens (1984) (see Chapter 13 for more details and other influences). Like other practice theories, the theory of practice architectures rejects dualisms and asserts that practices are situated, embodied, and indeterminate. They are prefigured by arrangements (conceptualised as practice architectures). What especially locates the theory of practice architectures in relation to other practice theories, however, is that it (a)

[10] Note that a practice landscape is also a site of practice. It is a site that has multiple sites of practice nested within it.

politicises practice; (b) humanises practice; (c) theorises relationships between practices; (d) adopts an ontological perspective (although it also addresses some epistemological questions); and (e) offers insights pertaining to education. In the following paragraphs we unpack this statement.

That the theory politicises practice[11] makes it similar in some respects to the work of Bourdieu, Giddens, and Foucault, who are known particularly for their attention to power and the political. What differentiates the theory of practice architectures from their work and that of others who attend to power is the four distinctive ways in which it foregrounds the political dimensions of practice.

The first of these is the theorising of the three overlapping dimensions of intersubjectivity: cultural-discursive, material-economic, and social-political. By identifying these three intersubjective dimensions, the theory highlights the complexity of sites of practice and the complexity of relationships between practices and sites, building on Schatzki's work in some respects. It also pays equal and due attention to the role of language, work*, and* power in the constitution of practices, showing how all three work together to make particular kinds of practice possible or impossible. In doing so, it has re-injected the practice debate with the critical insights of Habermas (1972, 1974) and Marx (1845, 1852).

The second way the theory politicises practice is by making explicit the *relatings* of practices. Schatzki (2002) described practices as nexuses of sayings and doings. While relatings are implicit in sayings and doings, the addition of relatings (i.e., a practice as a nexus of sayings, doings, and relatings) accounts specifically for those aspects of practices connected to palpable relationships between people (Kemmis and Grootenboer 2008, p. 38) and between people and the material world. This foregrounds such relational aspects of practice as "solidarity", "power" (Kemmis et al. 2014b, p. 30), inclusion/exclusion (Kemmis 2009), trust, and positionality, all of which can have moral-political significance.

The third is through the deliberate attention to how practices are *constrained* and *enabled* and the critical choice to use the language of 'constraining and enabling' in addition to prefiguring. (This contrasts with Schatzki's (2012) preference for using 'prefiguring' rather than 'constraining and enabling'.) The words *constrain*,[12] and *enable* sensitise us, as agentic beings, to the consequences of practices, and what we are doing when we create and sustain constraining and enabling practice architectures.

The fourth is that it accounts *for* praxis and, moreover, provides a fully theorised account *of* praxis (see Kemmis and Smith 2008; Kemmis and Grootenboer 2008). Few practice theories do this. The inclusion and theorisation of praxis reflects an ethical commitment on the part of the authors to contributing to a more sustainable, just, and healthy society. This locates the theory of practice architectures in the practice theory terrain as a practice theory underpinned by an explicit transformative agenda.

[11] This is not to suggest that practice is not already political.

[12] The word 'constrain' is not necessarily associated with negative outcomes. What constrains a practice may be preventing paths from being open because it is channeling action (via particular fences and boundaries) towards something else that has positive consequences.

The theory of practice architectures is also located within the field of practice theory as a theory that attempts to humanise practices and that rejects an objectivist approach to practice. There is a danger that, in focussing on routines of practice, and on sociality as something 'out there', theorists of practice might lose sight of the actual people whose sayings (and thinkings), doings, and relatings compose a practice. The theory of practice architectures has addressed this concern by attending to aspects of practice such as human agency and projects (incorporating the intentions of actors), and by acknowledging the role of dispositions in shaping practice. See the reference to dispositions in Fig. 1.3 above, and the discussion of dispositions in Kemmis and Smith (2008). People matter in accounts of practice, since practitioners cannot be separated from their practice (Kemmis and Smith 2008).[13] Bourdieu (1990) acknowledged this with his theorisation of *habitus*. The theory of practice architectures makes allowance for the role of people's life narratives, taking where necessary the term 'site' in its broadest sense to include a human life as a site of practice in which people's dispositions, intentions, and sense of agency as well as their practices are shaped intersubjectively, as people encounter each other in shared, and often contested, semantic spaces, physical space-time, and social space.

Attention to praxis has a similar humanising effect. The inclusion of praxis in the theory was part of a deliberate decision not to "take the actor out of the act" or "the person out of the unfolding events" since "*praxis* is the action of people who act in the knowledge that their actions will have good and ill consequences for which they have sole or shared responsibility, and who, in that knowledge, want to act *for the good*" (Kemmis and Smith 2008, p. 8).

Another aspect of the theory that distinguishes it from other practice theories is its focus on interdependencies between practices through the notion of ecologies of practices. It is not unusual for practice theorists to write about practices in ecological terms. Gherardi (2009) for example noted "theories of practice assume an ecological model in which agency is distributed between humans and non-humans and in which the relationality between the social world and materiality can be subjected to inquiry" (p. 115) and "theories of practice view actions as … being performed through a network of connections-in-action" (Gherardi 2009, p. 115). However, Kemmis and colleagues have gone beyond metaphorical reference to ecological relationships to a fully theorised account, built around ecological principles, of how practices relate to each other (see Kemmis et al. 2012, 2014b; Kemmis and Heikkinen 2012).

As we have intimated, the theory of practice architectures, like many other practice theories, offers an *ontological perspective* on practice. Its main concern is with what practices are; how practices happen; how they are shaped, constrained, and enabled; and what practices do. These are ontological questions. However, more recent iterations of the theory address *epistemological concerns* (e.g., how we learn

[13] This is a point of distinction between the theory of practice architectures and other theories that ascribe *agency* to material artefacts (e.g., actor network theory) as mentioned in the first part of the chapter. "Matter matters" (Fenwick 2010, p. 106) in the theory of practice architectures, but not to the point of assuming agentic status equivalent to that of humans in practice. How and that *matter* (i.e., the material) matters, is still seen as a matter of human sense-making.

in practice). The theory now incorporates the notion – following Wittgenstein's (1957) ideas about people being initiated into language games – of learning as a process of being 'stirred into' practices (Kemmis et al. 2012; see also Kemmis et al. 2014b), or 'stirred into' the sayings, doings, ways of relating, and the projects characteristic of practices, whilst in practice. This is based on an understanding of knowledge and meaning as located in intersubjective spaces, i.e., in the "'happening' … of language games, activities, ways of relating, and practices in which particular words are used, particular things are done, and particular relationships exist in the interactions between the people and things involved" (Kemmis et al. 2014b, p. 51). So, in theorising these aspects of practice, there are some comparisons that can be made with other accounts of how people come to know in a practice (cf. Lave and Wenger 1991; Gherardi 2006; Nicolini 2011). The theory nevertheless remains very much ontological in its orientation.

A last distinctive feature of the theory of practice architectures is that it also provides a basis for a contemporary theory of *education* appropriate for the modern world (Kemmis et al. 2014b) and a lens for exploring learning. It does so, firstly, through the conceptualisation of education as a practice, and, as just discussed, learning as a process of being initiated or stirred into practices (see Kemmis et al. 2014b). Although the notion of 'stirring in' is not a new concept, the theory of practice architectures gives it substance and extends our understanding of learning. This goes some way toward helping us understand what education is. Learning and the concept of being stirred into practice are as relevant to professional practices such as nursing and plumbing as they are to practices related to schooling. Secondly, the articulation of the 'education complex' (Kemmis et al. 2014b) helps to shed light on how learning practices shape and are shaped by other educational practices in school settings. Thirdly, the authors of the theory have made explicit links between the theory of practice architectures and the project of education – as contested as that project is – and whether and how practice architectures shaping education today are making possible, or hindering, the achievement of what Kemmis et al. (2014b) describe as the "double purpose of Education: to help people to live well in a world worth living in" (p. 21). Chapter 13 provides a discussion of, and a diagram showing, these links.

The distinctive aspects of the theory just described, and the theory's response to existing practice theories, provide a unique contribution to the contested space of the practice theory terrain. The theory is significant in other ways too, as we discuss next.

The Theory of PA[14] as a Theoretical, Analytical, and Transformational Resource

We believe that the theory of practice architectures furnishes many affordances, some of which will be evident in the case chapters that follow this chapter. Here we identify three main ways in which we think it is useful, having all drawn on the

[14] Practice architectures.

theory in our own research. As we mentioned in the introduction to this chapter, it is at once a *theoretical* resource, an *analytical* (or methodological) resource, and a *transformational* resource for those with interests in education and professional practice.

The theory is a valuable *theoretical resource* in that it provides an accessible and concise language for describing and interpreting the social world (in contrast to some of the more diffuse theories of practice already at our disposal). Yet the theory of practice architectures is comprehensive in its conciseness. It enables us to say how practices and practice architectures relate, and how they are interdependent, in a way that captures the complexity of relationships between practices and the arrangements that make them possible and hold them in place. This is important for our own sayings and thinkings/understandings as researchers, theorists, practitioners, and/or educators about the social spaces we inhabit. See Table 1.1 at the end of this chapter for an explanation of key terms and concepts.

Related to this, the theory is also a useful *analytical resource*. As an analytical lens, it allows us to identify actual empirical connections between practices and arrangements. The theory of practice architectures steers analysis towards what actually happens in a site, and the identification of the local arrangements that make practices of a particular kind possible within that site, or that shape local (site-based) variations of a practice. The theory does not offer a particular methodology, nor a set of strategies for doing the empirical work, but it does prompt the asking of new questions (that might be answered in a multitude of ways as the case chapters in this book attest) or thinking about old questions in new ways, for example,

What is it we are doing (i.e., what are we saying/thinking, physically doing, and how are we relating?) when we enact a particular practice?
What are the consequences of our current sayings, doings, and ways of relating?
What practice traditions, practices, and practice architectures are holding the current practices in place or making them possible, and how?
What cultural-discursive, material-economic, social-political arrangements enable and constrain the enactment of practice as praxis?
What is the role of human agency and power in constructing the practice architectures necessary for, or inhibiters to, the sustainability of particular kinds of practice?

The theory of practice architectures focuses on aspects of social situations that might be indeterminate and seemingly boundless, but that are nevertheless tangible and thus empirically manageable. Furthermore, the authors of the theory have provided detailed accounts of how they have put the theory to work in their own research analysis (see, for example, Kemmis et al. 2014b, especially the Appendix, pp. 223–272). This helps to address some of the issues highlighted by Nicolini (see 2013, pp. 180–81) about Schatzki's work in terms of being too theoretical and leaving gaps regarding how empirical work informed by Schatzki's ideas might be conducted.

Importantly, the theory provides a critical lens for critiquing aspects of the social world that create and contribute to unsustainability, unreasonableness, and injustice.

It is easy to brush aside notions of power in examining practice. The theory of practice architectures, by drawing attention to 'relatings' on the one hand, and social-political arrangements on the other, keeps questions about power at the centre of inquiry and thinking about practice. It acknowledges that sites of practice are sites of contestation, contradiction, tension, and struggle, and raises questions about what avenues for acting (saying, doing, and relating) are opened up, and closed down, by particular power dynamics at play. This includes in the practice of researching education and professional practice; see, for example, Pennanen, Bristol, Wilkinson, and Heikkinen's Chapter 12 in this volume.

In this respect, the theory is also a *transformational resource*. The theory of practice architectures can provide pathways for transforming education and professional practice (and research about these things) through site-based development. On February 19th, 1941, Winston Churchill, appealing for support to US President Franklin D Roosevelt, famously said "give us the tools and we'll finish the job". If we put the theory of practice architectures to work analytically in our own sites of practice, it can help us to identify what tools we need to finish the job, or, more accurately, to get on with the never-ending job of transforming education, and transforming professional practice more generally. It can be used as a framework for making *practical judgements* about what ought to be done in the situations at hand, i.e., in response to site-based conditions and circumstances.

As this book shows, the theory of practice architectures is already being put to work as a theoretical, analytical, and/or transformational resource in a variety of professional and educational settings. Some of this work takes the form of *critical hermeneutics* that explores why and how situations have become untoward (in the sense that they are unreasonable, unproductive or unsustainable, or the cause of suffering or injustice, or a combination of these). The book also shows examples of other work that takes the form of *collaborative reflexive inquiry* in which participants use the theory as a theoretical and analytical resource to understand their current practices and the practice architectures that hold their current practices in place, and, in the light of these insights and analyses, use the theory to deliberate practically about how to transform both their current practices and the situations in which they find themselves, in order to avoid or overcome any untoward consequences.

Organisation of the Book

In this chapter, we have laid a foundation for the case chapters in the book by introducing and locating the theory of practice architectures, the theory that the authors of the case chapters have variously put to work in their respective inquiries about education and/or professional practice. We have done so, first, by providing a brief sketch of the field of practice theory, second, by explicating some of the central ideas of the theory, and third, by locating the theory of practice architectures in relation to other practice theory and providing a snapshot of the distinctive contribution the theory is already making to practice inquiry.

From here the book takes us on several journeys of the theory in use, each of which is significant and distinctive in its own way. In Chapter 2, authors Christine Edwards-Groves and Peter Grootenboer closely examine practices in two Australian primary school classrooms, using the theory of practice architectures to productively zoom in on the practices that teachers and students co-produce through their language, actions, and interactions with each other as lessons unfold. Ela Sjølie takes us to the other end of the educational spectrum in Chapter 3 to discuss a Norwegian study of students' learning practices in university-based teacher education. Sjolie uses the theory of practice architectures to disrupt common (mis)understandings of theory-practice relations in initial teacher education, and to offer important insights into the challenges pre-service teachers face when they engage with educational theory in their initial teacher education studies.

Staying with the theme of university-based professional education, Chapter 4 by Nick Hopwood draws on an observational study of simulation classes in an undergraduate nursing degree. Hopwood creatively puts the theory of practice architectures in conversation with Baudrillard's concepts of hyperreality and simulacra to make a compelling case for rethinking simulation pedagogy in health professional education. In Chapter 5, we are prompted by Andi Salamon to rethink the agentic capacity of babies. Salamon reports on a study of practices in a particular early childhood setting, showing how early childhood educators' practices are shaped by their conceptions of babies' capabilities. The implications of certain conceptions for early childhood education pedagogy and babies' learning are explored through narratives of babies' interactions with educators and other babies. An interesting reinterpretation of 'sayings' in light of babies' pre-verbal capacities forms a key part of Salamon's argument.

Chapter 6 turns our attention to mentoring practices and Vocational Education and Training (VET) teacher learning. In the chapter, author Susanne Francisco introduces the idea of a *trellis* of practices that support learning, building on ideas articulated in the theory of ecologies of practices. The notion of a trellis emerges out of a discussion of the ecological relationships between mentoring and other practices that support learning in a longitudinal study involving novice VET teachers working in Australian Technical and Further Education (TAFE) colleges. In Chapter 7, Annette Green, Roslin Brennan Kemmis, Sarojni Choy, and Ingrid Henning Loeb explore the practice architectures supporting the practices of novice VET in Schools (VETiS) teachers. The chapter shows how these teachers' practices differ from other high school teachers' practices because of the VETiS teachers' histories of working in other industries, and their established ways of working with young people in those settings (as trainees and apprentices).

Chapters 8 and 9 zoom in on professional practice in schools. In Chapter 8, Lill Langelotz presents new insights into mentoring practices (also a focus of Chapter 6) in the context of continuing professional development of school teachers. The chapter fruitfully draws on both the theory of practice architectures and Foucault's notion of power to examine what enabled and constrained teachers' peer group mentoring practices in a particular school in Sweden, and what this meant for teachers' professional learning. In Chapter 9, Lena Tyrén takes up the themes of teacher professional

learning and power. She presents a narrative of how Swedish economic reform affected practices within a primary school during its implementation of a school development program (framed as action research). The chapter illustrates what can happen when national policy and local aspirations for practice in schools collide.

The next two chapters also shed light on endeavours to realise particular aspirations. In Chapter 9, Jane Wilkinson examines attempts by a school executive to enact leadership as a socially just practice and praxis. The story of how school leaders challenged particular arrangements affecting the learning and experiences of students for whom English is an additional language or dialect [EALD] (including students of refugee background) provides powerful insights into the interconnectedness between leading and other practices within schools (e.g., enacting policy, professional learning, researching and reflecting, and students' learning practices), and the implications of this for transforming school culture. In Chapter 11, Kathleen Mahon and Letitia Galloway discuss the impact of structural change (a departmental merger) within a university faculty on academics' endeavours to enact teaching practice as *critical pedagogical praxis.* The concerning but hopeful narrative shows how possibilities for critical pedagogical praxis can be negatively affected by mergers, but also ways in which academics can negotiate changing conditions and create enabling architectures amidst challenges.

Chapter 12, the final case chapter, takes us on a very different journey by turning the lens of practice architectures on researchers' practices. Matti Pennanen, Laurette Bristol, Jane Wilkinson, and Hannu Heikkinen provide a reflexive analysis of their collaborative research practices. They put the spotlight on the kinds of arrangements that enabled and constrained their sayings, doings, and relatings as researchers in an international research project, and in doing so, provide insights into what shapes collaborative research practices, and also some of the challenges researchers can face when using the theory of practice architectures.

The authors of Chapters 13 and 14 return readers' focus to the theory of practice architectures. In Chapter 13, Stephen Kemmis and Kathleen Mahon discuss the development of the theory, referring to some of the earlier theories that influenced its formation. Chapter 14, by Stephen Kemmis, Jane Wilkinson, and Christine Edwards-Groves, clarifies some of the key terms of the theory that have sometimes seemed ambiguous or confusing to people using it. Some of these ambiguities and confusions came to light in discussions among authors in the preparation of this volume. Chapters 13 and 14 serve as a reminder that the theory is both an historical product and a work in progress. Chapter 15, written by editors Susanne Francisco, Kathleen Mahon, and Stephen Kemmis, concludes the volume with a brief comment about the lens of practice architectures, as used in this book, pointing to some of the significant narratives, themes, and insights that the chapters collectively contribute to our understanding of education and professional practice.

Together, the chapters tell an important story of possibility. They bring into view areas of education and professional practice that demand more focussed attention, and in some areas, a rethinking of commonly held views. We invite readers interested in educational and professional practice, and in the theoretical, practical, and transformative possibilities opened up by the theory of practice architectures, to join the conversation this volume documents and extends.

Table 1.1 Key terms associated with the theory of practice architectures

Key terms	How used in the theory of practice architectures	Examples of chapters in which these key terms are in focus or problematised.
Cultural-discursive arrangements; material-economic arrangements; social-political arrangements	The three different kinds of arrangements that constitute sites of practice, and that shape practices.	Sjølie (Chapter 3) Langelotz (Chapter 8) Green, Brennan Kemmis, Choy, and Henning Loeb (Chapter 7) Tyrén (Chapter 9) Wilkinson (Chapter 10) Pennanen, Bristol, Wilkinson, and Heikkinen (Chapter 12)
	Cultural-discursive arrangements prefigure and make possible particular *sayings* in a practice by constraining and/or enabling what it is relevant and appropriate to say (and think) in performing, describing, interpreting, or justifying the practice.	
	Material-economic arrangements shape the *doings* of a practice by affecting what, when, how, and by whom something can be done.	
	Social-political arrangements shape how people relate in a practice to other people and to non-human objects (Kemmis et al. 2014b, p. 32).	
Ecologies of practices	Empirically discovered relationships between practices in a site.	Francisco (Chapter 6) Wilkinson (Chapter 10)
Education complex	The group of five practices "that have been interconnected with one another since the emergence of mass compulsory schooling in the mid-nineteenth century in the West, namely: (1) student learning, (2) teaching, (3) professional learning, (4) leading, and (5) researching" (Kemmis et al. 2014b, p. 37)	Wilkinson (Chapter 10)
Enmeshed (or enmeshment)	The term 'enmeshed' is used to describe the relationship between practices and arrangements, as in 'practices and arrangements are *enmeshed* in a practice'. The words 'entangled', 'entwined', and 'coupled' are sometimes used instead of enmeshed.	Langelotz (Chapter 8)
	The word 'enmeshed' is used in much the same way that Schatzki uses the word 'bundle'. In the theory of practice architectures, the word 'bundle' is reserved for the descriptions of how sayings, doings, and relatings hang together in the project of a practice: 'In practice, sayings, doings, and relatings are *bundled* together in a distinctive project'.	
Extra-individual conditions	Conditions "that exist beyond each person as an individual agent or actor" (Kemmis and Grootenboer 2008, p. 37).	
	The expression "extra-individual" was used by Kemmis in his earlier work (see Kemmis 2005, and references to "extra-individual features of practice" – p. 393). It appears in the original explication of the theory of practice architectures (see Kemmis and Grootenboer 2008, p. 37), but not in recent accounts.	

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Table 1.1 (continued)

Key terms	How used in the theory of practice architectures	Examples of chapters in which these key terms are in focus or problematised.
Hanging together (and bundling)	*Hanging together*, borrowed from Schatzki (1996), implies a connectedness and co-existence between entities concerned. See Schatzki (1996) on 'hanging together' and Wittgenstein's interpretation of *Zusammenhang*. – "state of held-togetherness" (1957, as cited in Schatzki 1996, p. 14, 171). See also 'enmeshment' above.	Edwards-Groves and Grootenboer (Chapter 2)
Intersubjective space	The space that lies between people (Kemmis et al. 2014b, p. 4). According to the theory of practice architectures, there are three kinds of intersubjective space: semantic space, physical space-time, and social space.	Edwards-Groves and Grootenboer (Chapter 2) Sjølie (Chapter 3) – semantic, social space (dimensions) Pennanen et al. (Chapter 12)
Meta-practices	The notion of meta-practices was used to denote practices that shape other practices (Kemmis and Grootenboer 2008, p. 39). Since many, many practices shape other practices, this expression has fallen by the wayside as the theory has been refined.	
Niche	An ecological metaphor for the conditions of possibility for a practice. The niche of a practice is composed of the cultural-discursive, material-economic, and social-political arrangements in a site that make this particular practice possible.	Hopwood (Chapter 4)
Practice	A socially established cooperative human activity involving utterances and forms of understanding (sayings), modes of action (doings), and ways in which people relate to one another and the world (relatings) that 'hang together' in characteristic ways in a distinctive 'project' (adapted from Kemmis and Brennan Kemmis 2014, April).	Sjolie (Chapter 3) – its relationship to theory Salamon (Chapter 5) – infants lived experiences as infant practices Hopwood (Chapter 4) – simulation practices as 'real' practices Wilkinson (Chapter 10) practices as contested
Practice architectures	The practice architectures of a practice are the particular cultural-discursive arrangements, economic-material arrangements, social-political arrangements that *together* make possible, and shape, that practice.	All

(continued)

Table 1.1 (continued)

Key terms	How used in the theory of practice architectures	Examples of chapters in which these key terms are in focus or problematised.
Practice landscape	Following Schatzki (2010), 'practice landscapes' refers to practice settings (e.g., early childhood centres, hospitals, TAFE Institutes, schools) where multiple kinds of different practices occur, and in which there may be multiple and overlapping sites of practice. The term encompasses the people who are emplaced in the setting, the practices that are enacted there, the practice architectures that give the setting its character, and the practice traditions that have been established in the setting over time. It encompasses the relationships between practices, practice architectures, and practice traditions within, and constituting, the setting.	Pennanen et al. (Chapter 12) Mahon and Galloway (Chapter 11)
Practice traditions	Practice traditions carry the imprints of prior sayings, doings, and ways of relating enacted in a practice. They "encapsulate the history of the happenings of the practice … and act as a kind of collective 'memory' of the practice" (Kemmis et al. 2014b, p. 27). Practice traditions are invoked in a workplace when people refer to 'the way we do things around here'.	Wilkinson (Chapter 10) Mahon and Galloway (Chapter 11) Pennanen et al. (Chapter 12)
Praxis	Used in both a neo-Aristotelian sense to denote "action that is *morally-committed, and oriented and informed by traditions in a field*" (Kemmis and Smith 2008, p. 4) and in a post Hegelian and post Marxian sense to denote "history making action" (Kemmis 2010a, p. 9).	Wilkinson (Chapter 10) Mahon and Galloway (Chapter 11) Green et al. (Chapter 7)
Project (as in the project of a practice)	Encompasses (a) the intention (aim) that motivates the practice, (b) the actions (interconnected sayings, doings and relatings) undertaken in the conduct of the practice, and (c) the ends the actor aims to achieve through the practice (although it might turn out that these ends are not attained) (Rönnerman and Kemmis 2016). Akin to Schatzki's (2002) concept of 'teleoaffective structure'.	Sjølie (Chapter 3) Hopwood (Chapter 4) Green et al. (Chapter 7) Langelotz (Chapter 8) Wilkinson (Chapter 10) – elaborates with reference to *telos* and aim
Sayings, doings, and relatings	The actions of which practices are comprised. *Sayings* (which include *thinkings*) include utterances and forms of understandings; *doings* include physical actions; and *relatings* include ways in which people relate to one another and the world. In practices, sayings, doings, and relatings are always bundled together.	Salamon (Chapter 5) – problematises infants' sayings Edwards-Groves and Grootenboer (Chapter 2) – spotlights relatings

(continued)

Table 1.1 (continued)

Key terms	How used in the theory of practice architectures	Examples of chapters in which these key terms are in focus or problematised.
Site	Following Schatzki (2003), the site of a practice is "that realm or set of phenomena (if any) of which it is intrinsically a part" (p. 176).	Edwards-Groves and Grootenboer (Chapter 2) Pennanen et al. (Chapter 12)
Stirred into practices/ learning	The notion of being 'stirred in' is intended to capture how people are initiated into practices, in other words, how they learn to go on in a practice. This is described in terms of people being be *stirred into* the sayings, doings, and ways of relating that comprise a practice.	Edwards-Groves and Grootenboer (Chapter 3) Sjølie (Chapter 3) Langelotz (Chapter 8)

Note. We present this table in the knowledge that definitions can sometimes be problematic. We do so in the pursuit of clarity, not to imply or encourage rigidity in their use. Some of the terms in this table are in common usage, but have been included because of their distinctive use in the theory of practice architectures.

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Chapter 2
Learning Spaces and Practices for Participation in Primary School Lessons: A Focus on Classroom Interaction

Christine Edwards-Groves and Peter Grootenboer

Abstract Learning in primary schools is typically located in the province of a classroom. Classrooms provide the cultural, linguistic, physical, and relational space for student learning. One way to understand the nature of this space – the learning space – is to reach beyond the boundaries of the four walls of the classroom (as a type of container object) to understand the practices and practice architectures in which students and teachers encounter one another in learning episodes or lessons each and every day as they step into their schools, step into their classrooms, and step into their lessons. This chapter directs us to the nature of these everyday learning spaces and the practices that enter and come to exist in primary school classrooms and the lessons that unfold there; lessons that unfold through language, in actions, and in relationships. In particular, we focus on the nature and influence of dialogue and its place in shaping these spaces and practices for learning as teachers and students encounter and make relevant and co-produce practices. The chapter makes use of actual classroom examples to exemplify the key ideas.

Learning in primary schools is inherently social and typically located in the province of a classroom. In classrooms, learning and teaching come alive as things happen. These *happenings* – as they occur in particular social and spatiotemporal realities – are ignited by the *in situ* actions (or nexuses of behaviours, after Schatzki 1996, p. 116) of those present. They occur only in the present as it unfolds, but they are always oriented towards the future and in response to the past (Kemmis et al. 2014). And so, as teachers and students engage with one another to do particular activities, they communicate with and relate to one another in particular ways that are more or less mutually intelligible or comprehensible (Schatzki 1996) to those in

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the practice at the time. For students and teachers, their encounters with one another in lessons, in classrooms, and in schools form part of their everyday life experiences. The way of being in particular classrooms flows through the particularity of the practices they encounter *and* co-produce *and* make relevant. The chapter examines the ways of being in a classroom with a focus on classroom dialogues; and, as will be illustrated through the empirical examples, classroom dialogue calls into relevance particular practices, or sayings, doings, *and* relatings, that shape lessons in interconnected and distinctive ways. These practices cannot be understood as arbitrary, unitary, or ethereal notions but as constellations enabled and constrained by the practice architectures present in the site *in*-the-moment.

Let's step for a moment into a reading lesson occurring in Miss Lilly's Year 1 classroom. This classroom is situated in a small rural school in NSW, Australia. As things unfold in this reading lesson for the students in this space at this time, Miss Lilly makes particular sayings, doings, and relatings relevant. She does this through the activities and resources she and the students encounter and the ways she relates to the students or expects them to relate to one another – these are both orchestrated and mediated through language in their utterances and dialogues. In this, the students are co-producers of practices by virtue of their being there and participating in the moment (i.e., through co-presence), since it is their contributions (whether these be what they say or do, or how they relate to others) that influence what happens next in each and every moment of the lesson as it unfolds:

Miss Lilly:	Right, everyone sitting on the floor, move in, move in…Okay, okay, focusing here up the front, let's have a look at this picture here, up here on this page ((Points to the required page)). Here we have those naughty characters, and aren't they getting into an awful mess? …
Miss Lilly:	((Continues)) …Sitting down everyone, get in a spot where you can see ((Children shuffling around)); sitting up straight. You need to be listening to me, paying attention? Right, who are the characters in this story, those messy//
Mitchell:	//Pig, the duck
Miss Lilly:	Oh no, remember you don't call out when we're doing our reading Mitchell. We've got to what? Don't touch the computer Kelsey. Come on now what do we do? Carmon?
Carmon:	Hands up ((quietly))
Miss Lilly:	Speak up Carmon so we can hear what you are saying
Carmon:	We put our hands up
Miss Lilly:	Right, another, yes? ((Points to Jemma))
Jemma:	And don't touch each other/
Trae:	/don't talk to each other
Miss	Yes, what else? Elsa move out from behind the pegboard so I can see you. Think about it, yes? ((Points to Tia))
Tia:	Look at the pictures, nah, illustrations I mean
Miss Lilly:	Yes, a good one, but we are thinking about our rules. Jack, good boy hands up.
Jack:	Wait ya' turn
Miss Lilly:	Wait your turn, good Jack/

Fig. 2.1 Miss Lilly's Year 1 classroom

Lai:	/Don't call out
Miss L:	Good boy, yes, that's right when we're doing our reading groups please remember those important year one rules for our reading, up on our chart. No calling out, mm, hands up and ah, wait for your turn, hands off. Now, back to the picture, who are these messy characters here? Oh look here…….

In this classroom, the reading lesson takes shape and is made comprehensible through the practices of those present at the time – Miss Lilly and her students. If we closely examine the turns of talk in the interaction, their words (*or sayings*, for instance, what is said, the language, the discourse as it flows sequentially and discursively) bring into focus (or make hearable) what counts as relevant in the moment. If we study the photograph above (Fig. 2.1), it is evident what activities people are engaging in (or their *doings*) and the objects and materials noticeably present at the time. As we will show, these students are not simply sitting on the floor facing the teacher, "learning to read"; they are participating in a number of interconnected practices.

For some practice theorists such as Schatzki (2002), sayings and doings are positioned as central to understanding the nature and sociality of practices. However, their rendering neglects (although it might imply) the ways in which the sayings and doings make evident or possible particular relationships between people in the practice and between people and the world around them. For Miss Lilly and her Year 1

students, as they participate in the reading lesson (evident in both the transcript and photo), they relate to one another and to their immediate world in ways that illustrate the necessity to overtly theorise the relationships that enable and constrain their practices. For them, their *relatings* are inextricably enmeshed in their learning experiences; therefore the connection of the relational dimension of practice to their sayings and doings cannot be reduced to any one of these actions independently of the other. Each of these dimensions of practice influences and is influenced by the existence of the other in the *happeningness* of learning to read in Miss Lilly's Year 1 classroom. (Happeningness refers to actual real-time practices as in the 'doing' of something in a here-and-now). Even more specifically, in the reading lesson, the particularity of what makes this a reading lesson is how the sayings, doings, and relatings (at the time) 'hang together' and are distinctly recognisable as, and relevant for, participating in a reading lesson. So, in the practice of learning to read, the sayings, doings, and relatings are always bundled together; this is implied when Miss Lilly announces, "when we're doing our reading groups please remember those important Year 1 rules for our reading". That is, to participate in the doing of reading groups in this classroom, the students need to think about particular things, contribute to the discussion using particular language, and relate in ways governed by the rules that are particular to this site; these hang together to constitute the reading lesson.

In other words, practices in classrooms both constitute and are constituted by the particular words used, the particular things done, and the particular relationships which exist in the interactions between the people and things involved. To participate also requires coherence through the demonstration of comprehensibility; the students (for example) show their comprehensibility by complying with Miss Lilly's demands (by looking at the picture), requests (by moving from behind the pegboard), or questions (by answering). From this, the theory of practices architectures (Kemmis and Grootenboer 2008; Kemmis et al. 2014) offers an analytic mechanism for understanding and articulating the particularity of 'everyday' social practices as they are constituted in particular sites in particular projects (like learning to read in Miss Lilly's Year 1 classroom). It also makes it possible to describe in fine-grained ways the arrangements that influence and shape practices that not only 'hang together' coherently and comprehensibility in the sayings, doings, and relatings found there, but that make participating possible.

Participating in Practices: The Practice Architectures

Participating in practices is inherently social. The transcript above reveals that, as the lesson is evolving to be a reading lesson in this Year 1 classroom, particular social transactions are encountered; in this, the particular kinds of sayings are shaped by distinctive *cultural-discursive arrangements* (like pronouncing the word 'your' correctly; using the word 'characters' or 'illustrations'; or requirements to take turns, think, listen, or speak audibly). At the same time, learning to read in Miss Lilly's classroom is influenced by the *material-economic arrangements* present like

the material resources (books, charts, boards, computers, chairs) and physical set-ups (computers placed in the technology centre, book cases in the library corner, desks arranged in pods, students sitting on the floor in a cluster, the teacher sitting on a chair facing the students). These material resources and physical set-ups arrange the doing of reading in Miss Lilly's classroom (like sitting on the floor in a particular way, looking at the picture, not touching the computer, putting hands up to indicate a ready-response). Simultaneously, in this classroom, particular ways of relating with one another and to non-material objects are being shaped by the *social-political arrangements* that exist or evolve there (like following Year 1 rules for reading, keeping hands off one another, not touching the computer, listening to the teacher, not talking to each other, looking up at the teacher as she reads, or even complying with the teacher question-answer routines).

To do reading on this occasion, Miss Lilly's sayings call into relevance and mutually shape particular material-economic arrangements (although some objects and materials are present but not relevant to the practice at the time; for example, the board behind the teacher or the pin board near the students are not drawn into use in this lesson) and particular social-political arrangements. Practices, therefore, come into being through

1. the cultural-discursive arrangements found in (or brought to) a site; for instance, the technical language of reading books, literacy, language and English curriculum, which have particular meanings attributed to them in reading instruction;
2. the material-economic arrangements found in (or brought to) a site; for instance, how the set-ups of material objects such as desks, resources, and computers are differently arranged in the English lesson to enable particular activities to be 'done'; and,
3. the social-political arrangements found in (or brought to) a site; for instance, how teachers relate to their students as the authority figure or how students relate to their peers and to the objects and resources in the site (Kemmis et al. 2014).

These arrangements occur as intertwined dimensions of practice, enabling and constraining particular kinds of sayings, doings, and relatings that exist or come to exist in classroom lessons. Therefore, to participate in Miss Lilly's reading lesson (as the project of the practice), the practices encountered through saying particular things, doing particular things, and relating with one another in particular ways are shaped by practice architectures, and these practice architectures are, in turn, shaped by practices as they happen. For instance, Miss Lilly's words (as talk-in-interaction) assemble particular ways of being or behaving (Schatzki 1996, p. 116) or acting (through interconnected sayings, doings, and relatings). These are mutually constitutive and co-produced.

Enabling and Constraining Participation

If we zoom in for an even closer examination of the following segment of transcript from the Year 1 reading lesson, we notice how the cultural-discursive arrangements, orchestrated through Miss Lilly's instructions, enable and constrain the students' experience of learning to read:

Miss Lilly:	Sitting down everyone, get in a spot where you can see ((Children shuffling around)); sitting up straight. You need to be listening to me, paying attention? Right, who are the characters in this story, those messy//
Mitchell:	//Pig, the duck
Miss Lilly:	Oh no, remember you don't call out when we're doing our reading Mitchell. We've got to what? Don't touch the computer Kelsey. Come on now what do we do? Carmon?
Carmon:	Hands up ((quietly))

This exchange illustrates the ways in which Miss Lilly's instructions create particular conditions for participation. Miss Lilly brings into the site (in this particular reading lesson with this particular group of students) particular language; this language simultaneously shapes the discursive flow of what happens in the lesson. For instance, the language noticeably influences the sayings (what students say, think, and talk about, like talking about behaving, illustrations, or characters in the story); the doings (what students can or can't do in this reading lesson, like answering questions, looking at the page, sitting up straight, or not touching the computer); and the relatings (how students relate to her, to each other and to the objects in the room like paying attention to the teacher, putting hands up to speak, or waiting to be nominated to answer). The cultural-discursive arrangements in this example therefore shape the practices encountered in this phase of the lesson and shape the classroom dialogue to be more about behaving and following Year 1 rules for reading, at the same time constraining students' opportunities for actually reading or learning more about reading (through identifying the characters in the story, for example). What is enabled in this case is a clarity about the rules for participating (who can respond and when, for instance, the teacher nominating Carmon to contribute an answer) and who is in a position of power (the teacher giving directives and mediating the actions of the students).

At the same time, the cultural-discursive arrangements both assemble and are influenced by the material-economic arrangements. This is signalled by Miss Lilly's requests for students to sit at the feet of the teacher, to face the front, or to not sit behind the pegboard, for example. In this, particular social-political arrangements characterise the relational realm, for instance, that the teacher has the power and agency whilst the students comply and obey. These arrangements occur as intertwined – or enmeshed – dimensions of the practice, enabling and constraining particular kinds of sayings, doings, and relatings that exist or come to exist in classroom lessons. Therefore, to participate requires mutual understanding about the practice architectures that pertain in the site. Significantly, as the transcript excerpt illustrates, these are only made relevant through the dialogues or talk-in-interaction (Schegloff 2007) encountered in the space. This example illustrates that lessons in schools, reading or otherwise, are not solely about the field of curriculum (like the discipline of English lessons), highlighting that lessons are constituted through dialogue that simultaneously organises a semantic space, a place in physical-space-time, and a social space.

Spaces for Learning: Intersubjectivity, Positioning, and Participation

In this chapter, we take an ontological approach (Schatzki 2002, 2010) to understand the nature of the learning spaces where lessons take place. This approach emphasises that practices like teaching and learning reading, for instance, always occur somewhere, in actual sites like classrooms. One way to understand the nature of the spaces is to reach beyond the boundaries of the four walls of the classroom (as a type of container object) to understand the practices and practice architectures in which students and teachers encounter one another locally; i.e., in particular lessons in particular classrooms in particular schools in particular communities. These are ontological considerations that demand attention be given to the actions of people in sites; i.e., in the practices and the circumstances in which they encounter one another; these are distinctive and particular to the accomplishment of practices. Therefore, the theory of practice architectures is a useful resource for understanding the ontological and existential composition of sayings, doings, and relatings that happen amid particular arrangements of entities in

- semantic space (whereby meanings are shared through language, and thought, in which mutual intelligibility and comprehensibility is possible);
- physical space-time (whereby things happen in locations in space and time and in which interactions in shared activities are possible); and
- social space (whereby shared encounters between people afford different kinds of roles and relationships, power, solidarity, and agency).

Together, these spaces form an *intersubjective space* such that teachers and students encounter one another in practices as interlocutors or co-participants in dialogues as they engage in interaction, and in interrelationships (Edwards-Groves et al. 2014; Kemmis et al. 2012). To understand participation as it relates to intersubjectivity, we leave Miss Lilly's classroom, and move into Mrs Andre's Social Studies lesson about Antarctica with her Year 5 students. The classroom where the lesson takes place is situated in a medium sized regional school in NSW, Australia.

At the beginning of the learning episode that unfolded (in real time), Mrs Andre arranged the students into "an inside-outside circle" where the inner circle of students rotated clockwise around the concentric circle. This is depicted in the photograph below (Fig. 2.2). As students moved to face another student, each new pair shared what they had learnt in their inquiry research about the issues facing Antarctica.

Figure 2.2 shows the ways in which Mrs Andre and the Year 5 students encountered one another in the practices of being in this particular lesson about issues facing Antarctica. These practices were shaped by Mrs Andre's actions. Her actions created a particular physical space; this space in turn influenced the kinds of interactions possible at the time, *in*-the-moment of their lesson. Through their positioning in the physical space, the Year 5 students were afforded the opportunity to talk directly with one another about what they had learned. In this, therefore, the physi-

Fig. 2.2 Antarctica lesson: inside-outside circle

cal arrangement of the students being configured as the "inside-outside circle" (visible in the photograph taken before the students came together for the whole class discussion represented in the transcript below) illustrates the way space in the dimension of physical space-time influences both the social space (where the students interacted with one another) and the semantic space (where the students could discuss and share what they had learnt through dialogue). This particular configuration of the physical set up in the classroom provided each student equal time for contributing to the classroom dialogue. After this sharing activity was completed, students came together to sit on the floor in a circle that included the teacher to engage in a classroom discussion; their dialogue is presented in this next transcript excerpt:

Mrs Andre:	Okay, by wandering around listening to what you were discussing in your groups, we've got a couple of things to consider as we were thinking about our big question//
Tom:	//What is the biggest issue facing the future of Antarctica?
Mrs Andre:	Right, good Tom… ((Continues))…thanks for reminding us of that, is Antarctica in danger of devastation? What are the issues? Are they going to destroy Antarctica?
Jamaal:	They could.
Mrs Andre:	'Could'? Why Jamaal? What do you mean by that? Can you go a bit deeper for us?
Jamaal:	Because people do go there to try to stop it ((0.4))
Mrs Andre:	Stop what?
Bray:	Stop global warming and stop tourists, like stop people coming to Antarctica.

Mrs Andre:	Hold on to your thoughts Bray. Let Jamaal finish his thought first, you know that's how we do it here.
Jamaal:	Well, some people go out to Antarctica and fish, fish everything out and so it might become more overfished.
Mrs Andre:	That's interesting Jamaal. Can you say more about that idea? What are the implications of that, of overfishing?
Jamaal:	So like the penguins and whales are dying. When the people like went there, to fish, like and they take too many fish, and the penguins have no food then. And like the Japanese whaling boats, they take too many, more than they need and they are becoming, um extinct.
Mrs Andre:	Jamaal, where did you learn that? Where's your evidence?
Jamaal:	Well, we went to lots of websites first and found out some of it, researching information.
Mrs Andre:	Oh right, so you researched some other things did you?
Jamaal:	And Mariana said she saw something on National Geographic channel too, what did you say again Mariana?
Mariana:	Yeah, well there was a show on about the fishing and whaling in Antarctica; and the Japanese wanting whales for food too, and the scientists have been studying and saying that the fish stocks are running low.
Mrs Andre:	Okay interesting facts here Mariana. O:oh, studying 'fish stocks', that's a technical term, good one, thanks for adding that Mariana. Anyone else want to add to Mariana's idea?
Bella:	Well Antarctica is used as a research station for scientists and experiments. They are studying, going there to find out more about the numbers of fish and how it has affected the penguins, especially the Emperor penguins I think they are.
Archie:	I didn't know that.
Mrs Andre:	Neither did I, Archie; yes, important facts for us all Bella, good to remember to add the detail so we get it right.

(Note: Transcript from Edwards-Groves et al. 2014).

The image and transcript illustrate forms of participation. In fact, to participate in this lesson, Mrs Andre and the Year 5 students created a space where, together through interactions and dialogue, meanings were shared and activities were conducted in their physical space (*in*-the-moment) as they related to one another in particular ways. This is an intersubjective space. Furthermore, for the 'lesson' to occur in this intersubjective space, the teacher-student or student-students' interactions necessitated a shared language that was mutually comprehensible; i.e., they had to come to shared forms of understanding. This notion of mutual comprehensibility in interactions is described by Kemmis and colleagues (2014) "as an interlocutory activity of meaning making" (p. 28). So, participation meant that Mrs Andre and her Year 5 students needed to come to mutual understandings about what language and shared meanings are necessary for participation in the conversations about the issues facing Antarctica; i.e., these students and their teacher created and participated in a semantic space as they encountered one another in their classroom interactions. Participation required knowing – and coming to know – how to do what was necessary to do the activities needed to find information about Antarctica and to engage in a class discussion; i.e., these students and their teacher created and participated in-the-moment in physical space-time. In this lesson, Mrs Andre and the Year 5 students also required knowing about how to 'be' a

social entity as they conducted their discussion and they waited for their turn to speak, acknowledged each other's contributions, and deferred to each other to extend their thinking; i.e., they created and participated in social space.

Therefore, in the *semantic space* of this lesson, we can hear a variety of conceptualisations of the issues facing Antarctica when Mrs Andre and the Year 5 students share talk about what they have learnt. A fine-grained examination of the talk produced in their interaction reveals the way that Mrs Andre and the students had developed a 'shared' knowledge through using specific language that was relevant and appropriate to learning about the issues facing Antarctica. In this space, the students shared information, to come to mutual understandings about content knowledge. They did this through using specific technical language such as 'fish stocks', 'research', 'study', and 'experiments', *as* they discussed the particular activities they engaged in to research information about Antarctica (like using websites, or watching the TV program National Geographic). To accomplish mutual understanding, Mrs Andre and the students used language to arrange, explain, and describe the content (what is this lesson about, what technical language makes it possible?). For example, when Mrs Andre asked Jamaal "What do you mean by that?" she overtly oriented the students to sharing their meanings with the view that understanding each other *and* the content is a priority. Further, they demonstrated mutual understanding of how they conduct a class discussion; i.e., they shared and demonstrated relational knowledge.

In *physical space-time*, we observe (empirically) different activities taking place in their Year 5 Social Studies lesson; these different activities influence the different ways of *doing* or accomplishing the lesson. Mrs Andre deliberately influenced how the students, the discussion structure, the resources and materials – as entities which co-inhabit the space of the classroom – would work and interconnect with one another. Specific physical set-ups (like the "inside-outside circle" depicted in the image, or having the students working in pairs, small groups, or in a whole class group arrangement), resources and materials (like websites, TV programs) were required (noting that at different times, on different days in different lessons with different purposes, different physical set-ups or arrangements will be required).

In their *social space* Mrs Andre and the Year 5 students experienced different kinds of social arrangements, participation rights, routines, and 'rituals' that shaped the roles and relationships between them. For example, when Mrs Andre asked Bray to "hold on to your thoughts to let Jamaal finish his thought first because that's how we do it here", she was signalling that all participants are entitled to finish their turn and that is how the relationship will work. In another way she is *stirring* them in to practices associated with participation and positioning (Kemmis et al. 2014). Interestingly, later in the discussion Mrs Andre returned to Bray (who interrupted another student's turn earlier) to ask him to make the point he raised previously:

Mrs Andre:	Now before we move on, back to you Bray, what was your point?
Bray:	Well, I was just going to say about the fishing, if you stop tourists from going there, stop them fishing all the food away from the penguins.

This "dialogic" move or action of returning to Bray to elicit his point created a social encounter that explicitly indicated to the students in this classroom that, although Bray's calling out was dispreferred initially, his contribution was important to the discussion. The teacher's talk practices (at this point in the sequence) overtly positioned him as an equally valuable participant in spite of the earlier discrepancy. This positioning is important in classroom interactions. Even further to this, as the exchange unfolded, it became evident that the students in this classroom also recognised, respected, and valued each other, their knowledge and contributions. This is exemplified when Archie acknowledged Bella's contribution that Antarctica is used as a research station for scientists to conduct experiments on fish numbers and the effects on the Emperor penguins, and when Jamaal recognised the facts that Mariana had seen on the National Geographic channel that he followed with an invitation to contribute her knowledge. These types of classroom exchanges create particular social-political arrangements that influence the roles and relationships encountered in classrooms, positioning participants in very particular ways; and in fact, positioning the students and the teacher as co-producers of lessons and knowledge.

Teachers, like Miss Lilly and Mrs Andre, and their students, use their knowledge and past experiences of learning spaces to generate appropriate behaviours, and the appropriateness of those behaviours, in turn, serves to define the context in which they interact (Edwards and Furlong 1979; Edwards-Groves et al. 2014). For example, when Miss Lilly asked the students to "remember" not to call out in reading, or when Mrs Andre stated that "it is good to remember to add detail", the teachers directly oriented their students to past experiences. These are mutually constitutive as students learn or come to learn the ways of participating by actually being present in the sayings, doings, and relatings at the time. To do this, they simultaneously bring forth what they know from past moments of participation to co-produce the present in interactions. It follows a Wittgensteinian view that learning is knowing how to go on or is an initiation into practices (Kemmis et al. 2014); i.e., that students are *stirred in* to the ways of learning in particular schools, in particular classrooms and in particular lessons from the moment they enter its boundaries.

The exchanges presented in the empirical material reveal the shape and dimensions of the intersubjective spaces created for learning and participating as the Year 5 students and their teacher Mrs Andre met one another in their lesson as interlocutors in their interactions. These interactions characterise learning as participating through interacting in the *cultural* (this is what we do here), the *linguistic* (this is what we are talking about and the language we use here), the *discursive* (these are the ways our interactions flow through the moments in time through socially organised sequences of turns), the *activity* (this is what we are doing here), the *physical* (these are objects and interaction arrangements we need here), and the *relational* (this is how we are positioned relationally and the ways we relate to one another here) space.

Lessons as Co-production: Students and Teachers as Co-learners and Co-creators of Knowledge

The practices that happen in classrooms are sites of "human coexistence" (Schatzki 2002, 2010) and as the empirical examples from Mrs Andre's and Miss Lilly's lessons show they are also moments of co-production (Edwards-Groves et al. 2014). The students are actors in the site and so, are co-participants in producing what happens there. What this means is that in the discursive sequential flow of the dialogue found in lessons, by responding to teachers' questions, by acting in particular ways, by inviting other students to give an answer, by choosing to use particular language, and by complying with the teachers' demands, the students (at the time) contribute to the unfolding of the lesson. Therefore, along with the teacher, students co-produce, through their part in the interactions, the lessons they are participating in. However, it is also true that in almost all cases where production and co-production are going on, reproduction accompanies them like a shadow – the act of production is also secondarily an act of reproducing or maintaining or reconstituting the practices of production for anyone who observes the production going on (Lundgren 1983). Schools, and so lessons in classrooms, are the most obvious contexts for reproduction since they are designed to reproduce the knowledge, skills, or values and norms appropriate for participation in society (Bourdieu and Passeron 1977). In Miss Lilly's lesson, for instance, the students are co-producing the interactive sequences that constitute a lesson at the same time as they are reproducing knowledge and norms about participation and reading.

In this vein, theorising classroom practices requires understanding what the practices and practice architectures encountered in classrooms are composed of in co-production and reproduction. However, of concern in this chapter is how teachers and students co-produce the practices of teaching and learning as they encounter one another in the sequential organisations of interactions in their particular lesson. Theorising learning practices as co-production positions students and teachers as co-learners and co-creators of knowledge; this requires understanding the sociality of practices. To illustrate we turn back to the empirical cases.

In Miss Lilly's reading lesson, students were involved in co-production when they responded to the teacher's questions and demands (which, in one way, are the practice architectures that shape the practice of reading in this classroom). They co-produced practices and practice architectures. For instance, they co-produced ways of relating to one another and to the Year 1 rules by actually doing these things; at the same time they co-created knowledge about how to behave by contributing information about "how we do reading". Additionally, co-production was evident in the students' and Miss Lilly's use of collective pronouns such as "we" and "our", for instance when Miss Lilly stated, "here **we** have those naughty characters", or reminded Mitchell "**we** don't call out when **we're** doing **our** reading", or when she proclaimed, "when **we're** doing **our** reading groups please remember those important Year 1 rules for **our** reading … [they are] up on **our** chart" or when Carmon responded "**we** put **our** hands up" to Miss Lilly's question. These examples illustrate

how lessons evolve through co-produced activities and practice architectures which are shaped by the language and dialogic practices encountered and enacted in-the-moment; these practices are firmly shaped by the social-political arrangements found there and influence participation and make possible particular ways of relating.

In Mrs Andre's Social Studies lesson, co-production of knowledge of content is exemplified in this transcript excerpt:

Mrs Andre:	Okay interesting facts here Mariana. O:oh, studying 'fish stocks', that's a technical term, good one, thanks for adding that Mariana. Anyone else want to add to Mariana's idea?
Bella:	Well Antarctica is used as a research station for scientists and experiments, they are studying, going there to find out more about the numbers of fish and how it has affected the penguins, especially the Emperor penguins I think they are.
Archie:	I didn't know that.
Mrs Andre:	Neither did I, Archie; yes, important facts for us all Bella, good to remember to add the detail so we get it right.

The exchange in this excerpt shows two key dimensions of co-production: first, the students are responsible for co-creating knowledge – with and for each other – about the issues facing Antarctica by sharing details and facts; and second, Mrs Andre signals her role to be one of co-learner as she also agrees with Archie's comment that he "didn't know that". To explain, Mrs Andre makes it explicit that Bella's important facts and Mariana's use of interesting facts and technical terms is a valuable contribution to content development for the whole of the class, thereby positioning students as co-contributors or co-creators of knowledge. Then by inviting others to extend the points raised by Mariana, she explicates that learning in this class requires co-production: "these are important facts for us all… good to add the detail so we get it right". The use of the words "us" and "we" signal that learning is a collective endeavour in this class; she makes co-learning and co-creating knowledge count. Consequently, Mrs Andre's use of this type of language shapes the social-political arrangements found in this site. Furthermore, being a co-learner involves co-creating knowledge through the sharing of language, mutual involvement in class activities, and taking responsibility for recognising and valuing each other and each other's contributions; and the reciprocity between these dimensions of practices is clear.

Presence and Relevance in Practices

Through the empirical examples presented in the chapter, we have seen how practices are enmeshed in language, activities, and ways of relating, which evolve through particular social transactions encountered as 'lessons'. We have also seen how participating in practices depends on people (like teachers and students) being co-present and co-producers of the particular sayings, doings, and relatings required

to accomplish particular projects (like a reading lesson or a social studies lesson). Co-producing practices and practice architectures in lessons requires teachers and students responding to what is present at the time in-the-moment, but also to what already exists or enters the practice. However, we have also seen that some arrangements are present but not relevant at the time in the lesson (for instance, the Smartboard was not used in Mrs Andre's Social Studies lesson with the Year 5 students); language, resources, physical set-ups, and ways of relating are only made relevant if these are raised or oriented to through the talk-in-interaction or dialogic practices. The talk makes particular practices and material objects or resources count in the doing of the lesson.

The Classroom Interactions as the Machinery for Meaning Making

Lessons unfold interactively through sayings, doings, and relatings. As such, classroom interactions form the machinery in which teachers and students encounter one another as interlocutors, in interactions and in interrelationships in practices (Kemmis et al. 2012). Consequently, to understand learning practices means to understand how teachers and students – as co-participants in dialogues – engage in social transactions that co-produce spaces for sharing and developing. The examination of the transcripts above illustrated the distinctive ways that these are co-ordinated (and to some extent mediated) through dialogic practices (often orchestrated by the teacher). The dialogues, made visible in classroom interactions, form the mechanisms that make particular learning practices relevant at the moment. For instance, as the lessons unfolded, the talk between the teachers and students drew in shared meanings and mutual understandings about how to go on in the particular practice at the time. This aligns with Wittgenstein's (1958) suggestion that people are initiated into practices by coming to know "how to go on" in the practice. Wittgenstein located meaning in language games and forms of life. According to Wittgenstein (1958) a *language game*

> is an activity of a particular kind; it involves participating with others with whom one shares broad 'forms of life' in using language in ways (or arriving at ways) that orient speakers and hearers in common towards one another and the world. In language games, one or more interlocutors may be present, as in an ordinary conversation among people meeting face-to-face or on the telephone, or absent, as in the case of the 'conversation' one has with the dead author of a book one is reading. To understand language from the perspective of language games is to reject the view that language can be understood in terms of meanings that are 'read off' in the mind, on a kind of picture theory in which words and sentences somehow correspond with states of affairs in the world. (Wittgenstein 1958, as cited in Kemmis et al. 2014, p. 28)

In this chapter, we similarly locate meaning in the particular language games experienced by participating in the moment-by-moment classroom interactions that shape the way of life for being a student in a classroom. Language games in

classrooms, as represented in the transcripts, are characterised by particular the sayings, doings, and relatings made relevant for the lesson at the time. Language and meaning making come into being through mutually produced classroom exchanges; these form a shared endeavour between teachers and students as each speaker in the moment attempts to make sense of the other within the flow of interaction. Examining language in the turn-by-turn interactions represented in the transcripts "is to see language not as a lexicon but as an interlocutory activity of meaning making" (Kemmis et al. 2014, p. 28). In turn, meaning making occurs only through language use – through teachers and students entering and using language in their classroom interactions. On this view, learning is not a solitary, cognitive achievement; on the contrary, like language itself, learning or participating in learning practices is a shared, collective, intersubjective achievement, i.e., as teachers and students meet one another in interactions.

The classroom interactions that occur in the everyday unfolding of teaching and learning form the glue that binds together the learning spaces and the practices in 'lessons'. Thus, learning in classrooms evolves intersubjectively as teachers and students co-produce (through their talk, their activities, and their relationships) the practices upon which they rely to support their learning and knowledge development. Conceptualising learning as a co-production of practices orients us to the sociality of classroom life, and, as our data show, orients us to considering learning to be about learning practices that rely on participating in language games. It also directs us to learning as being a shared culture developed through shared language and symbols; it orients us to the salient ontological and spatial-temporal features of *physical space-time*; and it orients us to the particular *social and political arrangements* that shape the ways teachers and students relate to one another (in interrelationships). In this way, to participate, students are *stirred in* to the particular semantic, physical, and social spaces of lessons through the particularity of the language games experienced as talk-in-interaction.

The Utility of the Theory of Practices Architectures for Theorising Classroom Learning and Teaching

In this chapter, to understand the *situatedness* and *happeningness* of participating in classroom learning episodes, we turned to the theory of practice architectures as a useful analytic mechanism that enabled deep conceptualisations of what constitutes learning practices as they happen *in*-the-moment in particular sites. And as we highlighted, learning spaces and practices for participation in primary school lessons, like classroom reading or social studies lessons, are always found to exist and unfold as sites of the social (Schatzki 2002) within the temporally located 'happenings' of the site (Schatzki 2010). These happenings were shaped by the sayings, doings, and relatings that formed the lessons we presented. The theory of practice architectures enabled us, as analysts, to "zoom in" (Nicolini 2012) to examine, in detail, the

moment-by-moment happenings or actions in classroom lessons as these were made visible in and relevant by the dialogic practices that were evident in the classroom. But, critically, it also enabled us to "zoom out" (Nicolini 2012) to see the ways in which the cultural-discursive, material-economic, and social-political arrangements simultaneously influence and are influenced by each other in semantic space, in physical space-time, and in social space. As the transcripts show, close attention to one of these dimensions on its own is not sufficient since each one is held in place by the presence of the others as interdependent, mutually informing resources for understanding the nature and conduct of practice.

Studying practice requires a methodological resource that allows the researcher to understand the cultural-discursive, material-economic, and social-political arrangements found in particular sites to offer a way to theorise the extent to which the practice architectures enable and constrain the enactment of practices. Our analysis of the particular empirical cases presented in this chapter, was strengthened by using the theory of practice architectures since it explicitly affords the possibility of a fuller description of practices by virtue of its making the relational dimension of practice explicit (in addition to the sayings and doings of practices). This feature of the theory of practice architectures enables the examination and critique of practices that the study of social life requires. In fact, it enables fine-grained attention to social practices that always encompass interaction and interrelationships through sayings, doings, *and* relatings. For us, it offered an analytic lens that enabled intense scrutiny of the moment-by-moment talk in interaction to explain how teachers and students, through co-production in dialogues, encountered one another in lessons through language constituted in activity, interactivity, and relationships.

At this point, however, we offer a caution to interpreting the three dimensions of practices that the theory of practice architectures identifies as a solid tripartite structure that always occurs as neatly uniform, seamless and evenly produced constructs. This is a misreading of the theory; rather, we must also explore how the sayings, doings, and relatings that compose practices, and practices themselves, are frequently contested. Understanding contestation allows us also to understand the dynamism of the sociality of practices. Therefore, for the theory to be a robust resource for studying practices like learning in classroom lessons there needs to be an acknowledgement of the uneven-ness and tensions that exist as people interact with one another in practices of one kind or another. Further to this, the theory of practice architectures is not an analytic method *per se*. Rather it provides the analyst with both a lexicon for describing practices as well as a theoretical lens to explore the nature and conduct of practices; it is a focusing research tool open to possibilities that enables a range of analytic techniques (such as the micro interaction analysis used in this chapter) for conducting philosophical-empirical inquiry.

To conclude, we turn to Badiou (2009) who once asked: "What does it mean to come to know a knot? Untying it is not enough, because it might be a matter of chance. It is also necessary to tie it" (p. 243). As a research object, *practice* is indeed a 'knotty' issue. To understand practices requires the researcher to unravel the knots of practices (like learning and teaching in classrooms) to discover the nuances and particularities of practices as they happen in particular sites. Retying these distinctive

pieces, in light of the cultural-discursive, material-economic, and social-political arrangements that make them possible, provides us with a rich and deep understanding of the complexities of learning spaces and the practices entering or already existing there.

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Chapter 3
Learning Educational Theory in Teacher Education

Ela Sjølie

Abstract This chapter uses the theory of practice architectures to disrupt common framings of the problem of teacher education as centrally about a theory-practice 'gap', and of the solution as integrating the two. Despite the fact that a persisting criticism is directed towards the 'academic' part of teacher education, we know little about student teachers' academic learning practice as learners in higher education. The chapter reports on a Norwegian study of 78 student teachers and shows how the theory of practice architectures can usefully illuminate some of the difficulties student teachers encounter when engaging with educational theory as part of their initial teacher education. It also offers a more nuanced understanding of the claim that teacher education is 'too theoretical'. Drawing on the findings from the study, the chapter argues that the 'project' of 'integrating theory and practice' might sustain the (inappropriate) dichotomy of theory and practice. It also suggests that the 'project' should rather be to support students in navigating how different practices hang together, not expecting coherence, but learning the skills to anticipate and respond productively to differences and tensions.

This chapter explores student teachers' learning of educational theory in university coursework and draws on a study of 78 student teachers enrolled in a Norwegian secondary teacher education programme. The backdrop for the study is the persisting criticism of professional education in general and teacher education in particular. Teacher education is claimed to be overly theoretical, unrealistic, and distant from practice (Darling-Hammond 2010; Lid 2013; Niemi 2002). Newly graduated and pre-service teachers feel inadequately prepared, and call for topics that can help them with the real challenges they face in the classroom (see, e.g., Aspfors 2012; Lid 2013; Roness 2011). Despite numerous efforts around the world over recent decades, the criticism remains strikingly stable, and the 'theory-practice issue' seems intractable.

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An extensive literature review of research on teacher education reveals a paradox. Despite the fact that the persisting criticism is directed towards the 'academic' part of the studies, and that considerable efforts around the world have focused on developing more successful *university-based* models (e.g., Calderhead and Shorrock 1997; Darling-Hammond and Lieberman 2012; Grossman et al. 2009; Korthagen et al. 2006; Loughran 2006), researchers rarely consider pre-service teachers as *learners* in higher education. With few exceptions, they are viewed as future or 'not-yet-' teachers. Research on student teachers exists almost in isolation from research on higher education. It follows from this that we know little about student teachers' *academic learning practice* as learners in higher education.

The main focus of the chapter is on how the theory of practice architectures can usefully illuminate some of the difficulties student teachers encounter when engaging with educational theory as part of their initial teacher education. The chapter uses the theory of practice architectures to disrupt common framings of the problem of teacher education as centrally about a theory-practice 'gap', and of the solution as producing 'harmony' or 'coherence' between the two.

'Learning to Teach' – A Discourse of Harmony and Coherence?

In literature on teacher education, the 'problem' of the 'theory-practice gap' in teacher education is often taken for granted as a point of departure for research, and the aim is to integrate, bridge, or close the gap. The use of the phrase 'theory-practice gap' or complaints about a 'disconnection' between theory and practice have become common, taken-for-granted parts of the cultural-discursive arrangements in the field of teacher education. Contained within these words is a wish for congruence or equilibrium between theory and practice or between university and school.

Furthermore, in the semantic space of teacher education in Norway as well as internationally, 'integration' and 'relevance' are key issues. For example in Norway, a main ambition is to make the different parts fit into an *integrated totality* and to create *coherence* within teacher education courses (KD 2003). An important factor for the students in experiencing 'relevance' is that the students need to understand *why*: Why are we learning about this? How does this fit into the overall plan? What are the connections between the different parts that we are studying – between university courses and school practice, between different topics or university disciplines, and between teaching and assessment? Finally, the need for making connections is encompassed in the 'academic ideal' of learning in higher education. The student is expected to make "the task coherent with their own experience; relating and distinguishing evidence and argument; looking for patterns and underlying

principles; integrating the task with existing awareness; seeing parts of a task as making up a whole" (Prosser and Trigwell 1999, p. 3).

Notwithstanding the importance of integration and coherence, there is a risk in unreflectively adopting a discourse of 'harmony and coherence'. Indications of such a discourse are often found in descriptions of the overall aim in teacher education as making the different parts 'fit seamlessly' into each other, or to 'close the gap' between theory and practice. The words we use shape practices, which in turn shape other practices (cf. Kemmis et al. 2014). There is, for example, a difference between talking about a 'practice shock' (which is easily associated with something unwanted) and talking about the conflicting and frustrating process of learning to teach – in a tension between idealism and practicality (e.g., in Johnston 1994). Britzman (2003) notes that learning to teach is often dominated by a discourse in which contradictory realities are underplayed and the difficulties and frustrations of learning to teach are left unspoken. As a result, student teachers may end up blaming themselves for failing, rather than reflecting upon the complexity of pedagogical encounters.

Teacher educators are participants of the practice of educating teachers. According to the theory of practice architectures, the particular kinds of sayings, doings, and relatings of this practice are harnessed together in the pursuit of the *project* of the practice. The project of a practice is the answer to the question '*what are you doing?'*, and encompasses shared or individual *intentions* of the people within the practice (Kemmis et al. 2014). Situated within a national and international discourse about 'the theory-practice gap', this chapter asks in a provocative way whether one of the current projects of teacher education is to create coherence and harmony between theory and practice, and thus whether it should or ought to be a project of teacher education.

The Study

The study described in this chapter started within a larger project that aimed to integrate theory and practice through an alternative model of organising practicum. The main idea was to have a continuous alternation between campus activities and school practicum throughout one entire semester. In general, the students were based in school 2 days a week, and on campus 1 or 2 days. In the 'traditional' model in the university being studied in this research, the students were based 4 weeks on campus, then 6–8 weeks in school, followed by another 4 weeks on campus.

The original research question of the study was "How can practicum be used to integrate theory and practice?" However, through the course of the study, the focus moved towards a critical inquiry using practice theory as a lens. Instead of accepting the claim that teacher education is too theoretical and asking the question of how to use the practicum to integrate theory and practice, I asked: *why do student teachers*

think teacher education is too theoretical? Are there any alternative explanations to those which have been reported in the research literature to date? Student teachers' engagement with university coursework became the main issue of interest, and the focus of the data collection was primarily on the university coursework.

The data comprise qualitative and quantitative data from a total of 78 student teachers from two different year cohorts of a 5-year combined degree Master's programme.[1] Twelve semi-structured interviews were conducted with a total of 24 student teachers. The interviews (a combination of individual interviews and focus groups) covered different aspects of the student teachers' learning practices, including questions about experiences from practicum and questions about being a university student. All 78 participants also provided written answers to the two questions: (1) "Describe in your own words what theory is to you", and (2) "What role do you think theory has for you as a student teacher and later as a teacher?" In addition, a whole year cohort (53 students) filled out a questionnaire about how they go about their academic studies.[2]

Learning 'Theory' Through the Lens of Practice Architectures

Within the framing of the problem of teacher education as centrally about a theory-practice 'gap', and of the solution as producing 'harmony' or 'coherence' between the two, the focus is often on how the programmes are structured and organised. In other words, the focus is on material-economic arrangements such as models of practicum or university-school collaborations. As for the student teacher, the main interest of researchers is the students' *teaching practice* (either actual teaching or how they think about teaching), but not the students' *learning practice* as learners in higher education (Sjølie 2014b).

As indicated above, I wanted to challenge the taken-for-granted and search beyond the surface of the claim that teacher education is too theoretical. The theory of practice architectures proved very useful for this purpose. The theory provides a holistic framework for exploring the dynamic relationship between conditions within the site of teacher education and the practices that unfold within them. In particular, the findings direct attention to the semantic and social space of this particular programme; including a focus on issues of discourse and power which are rarely discussed in literature on teacher education.

[1] In this programme, the students are provided with teacher education combined with a Master's degree in one academic subject (e.g., Norwegian) as well as one year's study in a secondary subject (e.g., History).

[2] For more details about methodology, see Sjølie (2014b).

Semantic Space: Exploring the Concepts of 'Theory' and 'Practice'

One of the questions explored in this study was how student teachers conceptualise theory. Specifically, student teachers were asked to describe what theory is and what role they think theory has for them as student teachers and later as teachers. The findings show that the participants tended to have a narrow view of theory – a dichotomous view in which theory belongs to the university and is largely seen as the opposite of practice (Sjølie 2014c). Furthermore, the student teachers' language contained 'sedimented' (and perhaps unconscious) patterns of how they talked about university and schools. University was largely referred to as an "artificial world" as opposed to the "real world". Teacher educators were referred to as "the guys up on the hill", and words such as "academics" and "research" often had negative connotations, while "those out there" or "those connected to real life" had positive connotations. To treat theory as something dry and boring (and as opposite to practice) is a natural part of everyday language and contributes to maintaining dichotomous conceptualisations of theory and practice. One might also ask if ordinary language and common sense (both in English and Norwegian) comprehend 'theory' in terms of 'sayings' (only loosely attached or unattached to doings) and 'practice' as 'doings' (only loosely attached or unattached to 'sayings'), thus providing an everyday-world validation of the notions of 'theory' and 'practice'? If so, then the so-called 'gap' between theory and practice is not a gap but a misalignment: theory and practice can sometimes pass one another in the semantic and physical space-time. When people feel there is not a 'gap' between theory and practice, the sayings and doings align with one another.

When asked about the role (or the purpose) of theory, the students' views were considerably more nuanced and included understandings of different kinds of relationships between theory and practice (see Sjølie 2014c for more details). Considering the common claim that student teachers mostly expect from teacher education to fill a "bag of teaching tricks" (Loughran 2006, p. 45), students could be expected to see the theory presented in teacher education as something to be transferred into practice in the form of *methods* or *rules*. Although this view was common among the students, they described other purposes of theory they regarded as just as important. For example, it was a common view among the participants that teachers need a shared theoretical foundation in education, and that theory can be used to "shed light on practice", to "give new perspectives", or to "expand one's horizon". The participants seemed to have internalised the value of academic preparation in education, which resonates with other studies (e.g., Roness 2011; Smith and Lev-Ari 2005).

However, an interesting finding was that the students distinguished theory *in general* from educational theory *in particular*. More specifically, they described *educational theory* as opposed to *real theory*. Many students referred to educational theories as "common sense wrapped in difficult language" or "intuition" which just confirmed what they already knew. Some of the students disregarded theory in

education because they felt it contained what they defined as personal views instead of research based, "true" knowledge. This was used as an argument to devalue and denigrate educational theory, and pointed to an ambivalent relationship to theory: On the one hand, teacher education is too theoretical, on the other, theoretical knowledge is important. The student teachers see learning to be a teacher as more than just acquiring a set of professional skills, and they understand that teacher education can provide them with important theoretical insights in that respect. However, educational theory is not really theory, but rather an articulation of what they already know. In other words: some theory is 'good theory', some theory is 'bad theory'. In the study (see Sjølie 2014b, c), these descriptions of theory are identified as the student teachers' problematic encounter with a new academic discipline – a discipline with a different epistemology compared to the one they know from their non-Education disciplinary studies. And, for some students at least (especially those whose disciplinary studies were in science), educational theory seemed less rigorous and productive (and more "ideological") than the kinds of theories they encountered in other fields of study.

The main conclusion drawn from the findings above is that the way student teachers conceptualise theory influences the ways in which they engage with theory in their university courses. Furthermore, the difficulties encountered by the students seemed to be manifested in the students' sayings in their negative characterisations of educational theory. In particular, it is taken for granted that educational theory is frequently "boring", "irrelevant", "artificial", and "idyllic" while practice is "exciting" and "real life". Teacher educators, meanwhile, are regarded as a rather homogeneous group of "boring" academics "living in a bubble". Like a collective memory sedimented into the student culture in the course, students share and take for granted particular discourses for discussing 'theory'.

Altogether, these findings direct attention to the semantic space and the cultural-discursive arrangements that help to shape student culture in this particular teacher education programme – one which may or may not be like other programmes elsewhere. In this study, the students' sayings about theory were explored in depth, and the findings pointed to possible conflicts and tensions in their assumptions about theory and also to possible differences between students' and teacher educators' assumptions about theory. 'Theory' and 'practice' are two very common words; by studying the learning practices that unfolded within this particular site, and the cultural-discursive arrangements that made possible the sayings of their practices, it was possible to show how these words were used and understood by students as participants within this particular practice of teacher education. While a common claim in literature about teacher education is that teacher education *is* too theoretical and hence the content must be changed, the findings in this study suggest there is a need for more explicit and critical dialogue amongst and between teacher educators and student teachers about the concepts of 'theory' and 'practice', and what each means in the field of education (and as distinct from their meanings in other fields of study).

Semantic Space: Learning to Read and Write Academic Texts

When exploring the students' reading and writing practices,[3] the participants reported considerable struggles linked to literature in their university courses in education (Sjølie 2015). The students appeared to be predominantly meaning-oriented, which means that they wanted to *understand*, not just *memorise*, the content of the texts they read. The students did, however, reveal considerable difficulties in achieving this understanding. They blamed authors for poor writing and for using difficult language, and seemed at times to be "put off" by the reading before they had even begun. As suggested in the previous section, this initial reaction might have been because the epistemology and genre of education texts differed from the epistemology and genre of texts in other fields they studied. The findings suggest that the intention of reading for understanding is not enough, which is often assumed in literature on student learning in higher education (Francis and Hallam 2000).

As for the discussion in the previous section about theory, the lens of practice theory provided an alternative interpretation of the common claim that teacher education is too theoretical. Although the participants in this study also made this claim, exploring their reading practice in more detail revealed that their difficulties in reading were not necessarily because the topic of the literature was irrelevant or that the theory was too abstract and general (cf. Darling-Hammond 2010). It could also be related to difficulties in understanding the language of the text that was different from what they had read before. This finding directs attention to cultural-discursive arrangements within the site. Previous academic experience, in this case successful experiences with reading and understanding academic texts in one field, do not necessarily translate into understanding new courses or texts in another. The theory of practice architectures conceptualises learning and education as processes of being initiated or stirred into practices by participating (Kemmis et al. 2014). This means that the student teachers are stirred into the sayings, doings, and ways of relating whilst reading and writing academic texts. Learning 'theory' is not only an induction into a body of knowledge but also an induction into the particular communicative practices of that body of knowledge – like the teacher education programme, and the discourses of teacher education and school pedagogy and didactics (for example).

The processes of being 'stirred into' the practices of reading and writing often contain a level of frustration. Within a discourse of harmony and coherence as mentioned earlier, there is a risk that the role of this frustration is underplayed; the consequence being that students' frustrations and following complaints are predominantly regarded as negative rather than educative (for all concerned). The indicator of success in higher education is student evaluations (cf. the student as consumer, McCulloch 2009) – evaluations in which the students are asked how they *value* the program, for example, how they value the *integration* of theory and practice and the *coherence* of different elements within the program. Frustration is a necessary part

[3] This was explored in both the questionnaire and the interviews.

of learning, and it is crucial that student teachers as well as teacher educators accept *and emphasise through their sayings* that being stirred into the practice of learning to teach is permeated by tensions and conflicts.

Semantic Space: Drawing on Different (and Separated) Discursive Resources

The most commonly explored of the aspects of the theory-practice gap in teacher education are the perceived disconnections (a) between what happens in students' academic studies and their field experiences (e.g., Zeichner 2010), and (b) between the theory studied in the teacher education programme and the practice the students observe in practicum (e.g., Allen 2009). Student teachers in this study also commented on these disconnections. They talked explicitly about it (in a negative way), and, as discussed above, their language about the course reflected a dichotomy between 'theory' and 'practice' as part of a taken-for-granted discourse about their studies in the university and their experiences in schools. Through the lens of practice architectures, this disconnection can be understood in terms of two distinct sets of practices in which the students participated, one enmeshed with the practice architectures of the university and the other enmeshed with the practice architectures of the schools (composed, in each case, by the cultural-discursive, material-economic, and social-political arrangements found in the different sites). The students experienced these two kinds of practices as disconnected, although they expected that they should be connected.

Although often described as *two* different arenas (or here, 'sites of practices'), analysis of the semantic space of the student teachers' learning practices revealed a third arena. The findings suggest that the students draw upon at least three sets of discursive resources associated with three different 'communities' they must relate to as student teachers: academia, school, and the student community. While taking a 'future teacher' perspective in school, they adopted two different perspectives in the university arena: one associated with the future teacher and the other associated with the role of a student in higher education. The shifting of perspective between university and school and between teacher and learner was particularly visible in how the participants talked about learning and teaching (see Sjølie 2014a).

The frequently heard claim that student teachers have narrow, 'traditional' (transmissive) views of teaching and learning was not supported by the findings of this study. In the interviews, each and all of the students communicated 'rich' and *constructivist* views of learning both for pupils' learning in school and for their own learning in the university (see Sjølie 2014a for more details). However, the students' talk about teaching revealed inconsistencies and tensions towards more 'traditional' views of learning when they shifted from talking about learning from a teacher perspective to talking about learning from a student perspective in higher education. When they described teaching in the university setting, there was a noticeable shift

to a *transmission* model of learning. In other words, their 'rich' views of learning were not necessarily used to describe their own situation as learners in higher education. While the focus as future teachers was to *change* traditional teaching in school, they seemed to *expect* traditional teaching in university, at times also resisting when it was not. The university, as a culturally and historically situated site for learning, carries strong connotations in terms of what these students expected and how they interpreted their learning experiences. This finding suggests that rich views of learning do not necessarily transfer to the students' own learning strategies, and might indicate that the students, rather than seeing themselves as part of a practice of becoming a teacher, stay in a passive receptive role in their enactments of practices of studying in their higher education studies in the university.

In research on student teachers' beliefs, it seems to be taken for granted that beliefs about learning are independent of 'context' (school or university, teacher or learner) (Sjølie 2014b). The findings of this study suggest that they are not, and that teacher educators should pay more attention to the discourses employed (and the specific cultural-discursive arrangements students encounter) in the different semantic spaces student teachers inhabit in different sites within their teacher education programmes. This includes attending to how core concepts such as 'theory', 'practice', 'teaching', and 'learning' are used and understood in these different sites.

Social Space: Relatings and Social-Political Arrangements

One of the problems with the perceived disconnection between university and school is that the students learn one thing on campus and see something quite different in school. For example, some observe their school mentors' teaching practices to be very different from the kinds of good teaching practices advocated in their university course. In this study, students frequently described their mentors' practices as "traditional teaching" which they contrasted with the more "innovative" and "fancy" teaching practices they learned about in their coursework. Some said that they wanted to teach according to the "ideals of teacher education" but that they failed, either because their mentor did not let them try the things they wanted to, or because the "ideal" practices did not seem to work (Sjølie 2014a; Sjølie and Østern Forthcoming). The cultural-discursive arrangements present in the culture of teacher education seem destined to prepare student teachers for this eventuality and thus to preserve it as an enduring possibility: they understand both these kinds of 'failures' in terms of a discrepancy between the 'ideal world' and 'reality'.

This finding became more interesting in light of students' elaborations about why they did not teach according to their ideals. Several revealed that the ideals (of good teaching) were not so much theirs but rather the teacher educators' ideals. In terms of *discrepancies*, it could be interpreted as discrepancies between what they know – or have "heard over and over again" – is right and what they end up doing or what they see other teachers do. In other words, they experience a gap between

what they *think* (which could be 'theory') and what they *do* ('practice'). Some talked about how they ended up having teacher-led instead of student-centred teaching since they thought it was easier to 'control' learning that way, while others said explicitly that, in the teacher education programme, there had been little room for questioning prevailing views of learning, in particular socio-constructivist views of learning. One of these students expressed her concerns about some teacher educators who acted as *experts* instead of using their *expertise* to support and empower the student teachers (Sjølie 2014a). She highlighted the importance of feeling that her knowledge is important – "that it counts for something". Another student complained that while the university holds a view of what is right or wrong, there is room for many different views in school. Still another student claimed that "sometimes it becomes more like a morality sermon than actual teaching". In light of the alleged 'theory-practice gap' in teacher education, these findings point to yet another facet of the 'gap': the difference between teacher educators' ideals or values, and student teachers' existing (and robust) images of learning and teaching.

The normative discourse described here relates to both cultural-discursive and social-political arrangements – in fact, to the way different kinds of arrangements are bundled together in different practices and enmeshed with the practice architectures in different sites. Most of all it directs attention to the student teachers' view of relatings and social-political arrangements within the site. The students are invoking certain distinctions and relations between 'us' (the students), 'academics' (university boffins), and 'teachers' (real practitioners). These relationships work to maintain relationships of power, for example the question of what constitutes valid knowledge. Within the project of creating coherence between theory and practice (as indicated earlier), a 'disconnection' is almost exclusively described as something unwanted or negative. Rather than to explore and reflect upon the differences and tensions, the students seemed to face discrepancies with the question of 'who's right?' or 'who ought to be believed?': the 'academics' or the 'teachers' (or 'themselves').

Above, I suggested that the students draw upon at least three sets of discursive resources. The academic discourse was then presented as *one* discourse. The students also often referred to university teachers as *one* homogeneous group of academics. Lea and Street (2000) stress the fact that the academy is not a homogeneous culture. This is perhaps particularly true for teacher education. The teacher education faculty in this study comprises any number of combinations across at least three dimensions: (1) from current schoolteachers with a part-time position at the university to 'pure' academics, (2) from a background in education science to the various academic disciplines (or combinations thereof), and (3) from professors to administrative staff. It is reasonable to believe that this heterogenic nature implies contradictory ideas and understandings of core concepts between the participants in various practices within the site (such as 'theory' and 'practice' or 'integration' and 'coherence'). A question that remains open for investigation for future research is: what characterises the semantic and social spaces of this heterogenic faculty? And how do these spaces shape practice architectures for student teachers' learning?

Concluding Remarks

In this chapter, I have focused on how the theory of practice architectures can shed new light on the persistent criticism and the theory-practice discussion in teacher education. In the research literature, the blame for student teachers' dissatisfaction with teacher education is more often than not put on traditional teaching methods and a prevailing theory-into-practice view of teacher educators (e.g., Korthagen et al. 2006). The argument in this chapter is that this is a far too simplified and generalised description of teacher education programs around the world. I have also suggested that the 'project of creating harmony and coherence between theory and practice' is misplaced. A constant focus on 'solving the theory-practice issue' or 'integrating theory and practice' might sustain the (false) dichotomy of theory and practice. Perhaps the project should rather be to support students in navigating how different practices hang together, not expecting coherence or harmony, but learning the skills to anticipate and respond productively to differences and tensions.

Research literature contains many different representations of the 'theory-practice gap'. Findings from this study add further possible representations or explanations: lack of explicit attention to theory-practice relationships, differences between teacher educators' ideals and student teachers' personal stance, as well as possible different projects of student teachers and teacher educators. For example, while students might be directed towards developing skills and competences, teacher educators might aim to foster critical reflection. Rather than being a 'gap' between theory and practice, it can thus be understood as lack of shared understanding between students and teachers (see also Lea and Street 2000; Storch and Tapper 2000; Wideen et al. 1998).

In the endeavour to reach beyond the surface of the students' practices and spontaneous answers, the practice theory lens has proved very useful. The critical power of the practice lens lies partly in its focus on revealing hidden knowledge of a practice (cf. Gherardi 2009). In the attempts to capture the implicit, this study has directed attention to the dynamic relationship between the conditions in different sites within teacher education and the practices that unfold in these different sites, each enmeshed with the distinctive practice architectures of its site. Particular contributions are the findings related to the semantic and social spaces, which suggest rather different explanations for student teachers' dissatisfaction with theory than those found in much teacher education research to date.

Above all, the findings from this study offer an important contribution to teacher education because they direct attention to a topic that is not discussed in the research literature. Although student teachers are students in higher education, their *academic learning* has not been much studied. Furthermore, issues of discourse and power are rarely discussed in research on teacher education (or higher education more generally). 'Practice' is largely used in relation to school teaching practice, rather than the (very different) kinds of practices of higher education enacted by the different kinds of participants in teacher education programmes. The findings from this study suggest that we start paying more attention to the practices that unfold within the university part of teacher education.

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Chapter 4
Practice Architectures of Simulation Pedagogy: From Fidelity to Transformation

Nick Hopwood

Abstract In this chapter, I put the theory of practice architectures to work in re-imagining simulation pedagogy in university-based professional education. I locate simulation within a broader landscape of links between higher education and the professions, before outlining key features of existing research on simulation in health professional education. This links to the empirical context underpinning the chapter: an observational study of simulation classes in an undergraduate nursing degree. I take up calls to enrich the theoretical basis for simulation pedagogy, and to shake off an attachment to the notion of 'fidelity'. Weaving practice architecture theory with Baudrillard's concepts of hyperreality and simulacra, I analyse three moments from observed simulation classes. I show how these are constituted as productive pedagogic moments, not through a logic of mirroring stable realities of practice, but through much more fluid play between real and imagined worlds. This provides a basis from which to pinpoint the transformative potential of simulation, avoiding the traps of conservatism that accompany a view that is too closely tied to a fixed, stable reality referent. This involves a shift from simulation (re)creating practice architectures and practices based on an 'as if' logic, to simulation based on a 'what if' notion, where cultural-discursive, material-economic, and socio-political arrangements of both real and imagined practices come together, interwoven with those of responsive, emergent pedagogy.

In this chapter, I put the theory of practice architectures to work in re-imagining simulation pedagogy in university-based professional education. I locate simulation within a broader landscape of links between higher education and the professions, before outlining key features of existing research on simulation in health professional education. This links to the empirical context underpinning the chapter: an observational study of simulation classes in an undergraduate nursing degree. I take up calls to enrich the theoretical basis for simulation pedagogy, and to shake off an attachment to the notion of 'fidelity'. Weaving practice architecture theory with

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Baudrillard's concepts of hyperreality and simulacra, I analyse three moments from observed simulation classes. I show how these are constituted as productive pedagogic moments, not through a logic of mirroring stable realities of practice, but through much more fluid play between real and imagined worlds. This provides a basis from which to pinpoint the transformative potential of simulation, avoiding the traps of conservatism that accompany a view that is too closely tied to a fixed, stable reality referent. This involves a shift from simulation (re)creating practice architectures and practices based on an 'as if' logic, to simulation based on a 'what if' notion, where cultural-discursive, material-economic, and socio-political arrangements of both real and imagined practices come together, woven together with those of responsive, emergent pedagogy.

This chapter enriches the conversation opened up in this book, exploring and developing new connections between practice architecture theory and empirical material. The theory was developed largely through close connection with studies of school-based practices. Deploying key practice architectural ideas here in the context of higher education widens the scope of application, and makes links with previous work in which the theory was used to explore health professional practices (Hopwood et al. 2013).

Simulation immediately brings up ideas of multiple practices coming together. There are the practices being simulated (the ones 'out there' in the 'real' settings), and there are the practices of simulat*ing* – role playing, (inter)acting, materialising certain features, speaking others, relating in ways that uphold the simulation. Simulation *pedagogy* implies even more practices and their associated architectures: those of teaching and learning. In this chapter I do not dwell explicitly on questions of the relationship between teaching and learning, although I do pull out from the discussion of empirically documented moments instances where there are reasonable grounds for commentary on pedagogic effects. I also follow the 'what if' logic of the chapter's argument, and take the moments as a basis for speculative commentary. This leaves the question of the relationships between clinical practices, simulating practices, pedagogic practices, and practices of learning.

Following the broader framing of the theory of practice architectures, I view these practices in ecological relation (see Chapter 1, this volume). In so far as the project involves learning that has some positive effect on clinical practices, then they all imply each other. Simulation pedagogy brings these practices into particular relationships, occupying a *niche* that is not available through other pedagogic practices such as the lecture or clinical placement (discussed below). In this niche, there is interdependence between practices of clinical work, simulating, teaching, and learning. None can be taken out while leaving the niche intact. I use Baudrillard's concepts to show how this niche emerges out of such relationships: no one practice precedes the others, especially not the 'real' clinical practices 'out there'. Following non-representational logic (see below), I see simulation pedagogic practices as both a distinctive kind of practice (singular, as a space of multiplicity), *and* as part of an ecology of multiple (other) practices. There is no need to find a singular resolution underpinned by linear sequence.

Simulation Pedagogies in the University

A Bridge to Professional Practice

While higher education serves diverse social, cultural, and economic functions, an important role concerns the education and formation of future professionals (Abrandt Dahlgren et al. 2014; Billett and Choy 2014; Gonczi 2013). Billett and Choy (2014) write of the need to integrate learning experiences across university and practice settings, arguing that professional knowledge is culturally and socially situated, *and* materially grounded. In their view, effective professional education must help students develop conceptual perception and sensory intelligence through engaging in relevant epistemic environments. This means being and acting in settings in which particular ways of knowing are prompted, required, shared, and recognised. Thus students can be introduced to the expert or knowledge communities of their professions (Nerland and Jensen 2012). Nerland and Jensen (2014) argue that professional learning should be understood in relation to wider ecologies of knowledge, and that the enrolment of practitioners into profession-specific fields of knowledge is a critical condition for their successful participation in professional practices.

Making such intimate connections between university learning and the worlds of practice requires sophisticated and diverse pedagogic responses. These include placements, internships, service learning, training wards (in the case of health professional education), and simulation (see Breckwoldt et al. 2014; Hopwood et al. 2014, 2016; Lind Falk et al. 2013; Rooney et al. 2015). Simulation dates back at least to the seventeenth century in medicine, and its formal folding into university curricula spans nearly a century (see Breckwoldt et al. 2014). In recent years, however, simulation has assumed an increasingly prominent presence in higher education. I will explain reasons for this below, but will first outline and problematise some commonly held notions of what simulation-based pedagogy involves.

The simulation pedagogic practices I am referring to in this chapter occupy a particular niche within higher education. Simulations are increasingly provided as a means to further learning for working clinicians (as for pilots, military personnel, aid workers in high-risk environments). However, when undertaken in the context of a university degree, they take on a different character, and further the ends of a different and distinctive project. Of particular relevance in the higher education context is the fact that participants may have little or no experience of 'real' environments, and may find stepping into simulated roles challenging, encountering scenarios and features of them (such as time pressure, complex team work) perhaps for the first time; these might be routine and familiar to the experienced clinician.

Simulators in (higher) education settings can take a range of forms. These include low- or no-technology role plays, affordable stand-ins for material features of practice (as when chicken fillets are used for students to practise suturing), digital models,

and elaborate equipment folded into wider material reproductions, such as manikins used with recreations of hospital wards. Breckwoldt et al. (2014) write:

> Simulation learning denotes learning with a safe educational environment, in which some form of reality is simulated. Learners have to learn and act within this environment… Simulation learning is a practice-based, close-to-authentic kind of learning within a learning environment which permits the design of systematic instructional efforts. (pp. 673–674)

A number of key points are surfaced here. The first is the idea that 'some form of reality is simulated'. This suggests that simulations draw from and reproduce aspects of the existing world – both a common sense and problematic notion: too rigid a tie to a prior reality can undermine the pedagogic potential of simulation. There is a strong sense of simulation following an 'as if' logic here. Mentioned by Breckwoldt et al. (2014),'close-to-authentic' learning usefully signals a preoccupation in much simulation education literature with the notion of fidelity, although the assumption that higher fidelity or more authentic equipment and experience leads to better learning has been debunked (see Dieckmann and Krage 2013). Note the conservatism inherent in such descriptions: if the starting point is a reproductive borrowing from reality, then we risk overlooking the transformative role of simulation.

Simulation in Health Professional Education

Within health professional education more specifically, there are a number of drivers fuelling the increasing use of simulation-based pedagogy. An overarching concern is to improve patient safety and outcomes by reducing clinical errors and enhancing skills of new graduates, particularly when acting in high-pressure situations, such as critical care (Dieckmann and Krage 2013). Related to this is the idea that simulation offers a place where mistakes can be made and particular events (such as major accidents) can be enacted without harm (Breckwoldt et al. 2014). A second issue relates to the difficulties experienced by many universities securing clinical placements for students (Arthur et al. 2011). Simulation is seen as stepping in for time in 'real' clinical environments (Issenberg et al. 2011), and perhaps even having benefits over clinical placements, including increased control and standardisation over what students are exposed to.

Simulation can be used to enhance procedural skills (Hatala et al. 2014), but is also seen as a means to accomplish certain curricular ends that are otherwise difficult. It can provide 'illustrative clarity', particularly relating to phenomena that might not be immediately or readily visible (Breckwoldt et al. 2014). For example, teaching future doctors to conduct a pelvic examination is difficult, because the work is significantly (but not totally) located *within* a woman's body. Hence pedagogies using plastic models, virtual representations, and professional patients have been developed (see Hopwood et al. 2014). Scenario-based simulations have

emerged as a key means to integrate cognitive, motivational/affective, psychomotor and social facets of learning. They can address clinical and communication skills, and introduce other elements such as time pressure, team work, and inter-professional work (see Ahn et al. 2013; Nyström et al. 2014).

Research on Simulation in Health Education

There is a vast literature on simulation in health education, too large to do it full justice here. However it is possible to outline the major features of the current empirical landscape in terms of the questions and concepts that have shaped enquiry to date. The prominent questions relate to the two drivers for increased use of simulation described above. References provided below are indicative rather than exhaustive, citing review papers where possible.

Much research on simulation in health education has focused on instrumental questions of *effectiveness*. Some have looked at immediate outcomes, seeking evidence that simulation helps students acquire psychomotor skills, knowledge, confidence, critical thinking, clinical judgement, and non-technical skills such as teamwork (Issenberg et al. 2005). The 'golden egg' question is often framed as one which demonstrates that simulation approaches are effective (or more effective than others) in ensuring patient safety (Cook et al. 2013).

Linked to this are studies that seek to assess pedagogic effectiveness and inform curricular design. Arthur et al. (2013), Cook et al. (2013), and Dieckmann and Krage (2013) have outlined quality indicators for designing simulation learning, and success factors or barriers to effective implementation. However Berragan (2011) suggests that the theoretical basis for simulation pedagogy may be lacking or overlooked in agendas that are chiefly occupied with such operational concerns. I will return to this point later, but will first address a final central preoccupation of existing simulation pedagogy literature: *fidelity*.

An obvious focus relates to the degree and forms of realism of the simulat*or* or simulat*ion*. Fidelity has numerous dimensions: physical (material), semantic (construction of meaning), and phenomenal (experience) (Dieckmann et al. 2007). These ideas invite a practice architectural reading, which would hold that simulations are constituted not just in material set-ups, but also in the spoken, symbolic, and social dimensions of action. The accomplishment of an 'as if' world, in which a manikin becomes a patient, in which students become (however momentarily and hesitantly) nurses and doctors, is one that depends on certain material-economic, cultural-discursive, and socio-political arrangements. A realistic simulator guarantees nothing. It must be enacted into being, touched, spoken to, responded to by people who constitute each other as practitioners in their social relations and modes of discourse.

Differing levels of fidelity are appropriate depending on the learning objectives (Arthur et al. 2013; Hatala et al. 2014). When *learning* is the focus, flawless recreation of the real world is less important: what matters is finding situations that help

students learn, rather than ones that exactly mimic clinical counterparts (Dieckmann et al. 2007). I further undermine fidelitydiscourses by connecting the theory of practice architectures with Baudrillard's notions of hyperreality and simulacra. This is an important move. Norman (2014) argues that if simulation education is to 'come of age', then we must let go of fidelity and find new framing concepts. This does not mean varied dimensions of fidelity are totally ignored, but that they are approached from a view that does not stem from a correspondence or mirror-based notion of simulation.

Focusing on operational concerns and technological affordances has meant that the pedagogy of simulation has often been neglected (Berragan 2011; Breckwoldt et al. 2014). Kaakinen and Arwood's (2009) review of simulation research in nursing for learning theory found a dominance of issues of pedagogic design and teaching, and a paucity of theoretical resources and theoretically informed research that grapple more closely with what is learned and how. Berragan (2011) points to the need for theoretical groundwork, while Schiavenato (2009) notes the problematic absence of rich theorisations, particularly in terms of building (alternative) ideological bases for simulation. Weaving the theory of practice architectures with Baudrillard can accomplish precisely this.

Re-thinking the conceptual basis of simulation pedagogy contributes to a wider project, questioning the assumptions surrounding the 'preparation' of future professionals for practice, and the role of universities in this process (Gijselaers et al. 2014; Rooney et al. 2015). The promise of practice theoretical approaches in addressing such concerns is clear (see Hopwood et al. 2014, 2016). Ahn et al. (2013) and Nyström et al. (2014) used practice theory to link multiple ways of knowing with enactments and spaces in scenario-based simulations. In such approaches, practices are held centrally in the gaze. This enables much more fluid accounts of simulation and is central to my work of disrupting notions of fidelity, and thus the entangling of the theory of practice architectures with Baudrillard's ideas.

A Different Basis for Conceptualising Simulation Pedagogy

Hyperreality and Simulacra

Baudrillard's (1981, 1983) concepts of hyperreality and simulacra contain the kernel of an exciting and distinctive way of understanding and re-imagining simulation pedagogies in the context of university-based professional education. Hyperreality refers to a breakdown in stable relations between a real original and a model that mirrors it. Baudrillard contended that "to simulate is to feign to have what one hasn't… simulation threatens the difference between true and false, between real and imaginary" (1983, p. 5). Rather than seeing simulations as more or less complete and faithful mirrors of reality, we can think instead of simulacra, where there is no easily fixed, stable original. I will use the theory of practice architectures to

explore how simulation pedagogies blur the lines between real and imaginary, finding value in their playful creation rather than recreation, of presents, pasts, and futures. In this way, the logic of simulation shifts from 'as if' to 'what if'.

It may help at this point to provide a general yet concrete reference for these ideas. Theme parks often present visitors with exotic worlds: the 'wild west', the 'world of tomorrow'. The wild west does not fully or accurately reproduce the cultural-discursive, material-economic, and social-political arrangements of the historical American West. There is selection, adjustment, invention. This wild west is not compromised by its infidelity. Visitors enjoy stepping into it, not because it is 'as if' the 'real', but because they are invited to step into a 'what if' scenario. This stepping is bodily and imaginary – or rather the imagination is accomplished through a whole of body act performed amid particular arrangements. The world of tomorrow even more obviously lacks a stable real referent: it was only ever imagined, it may never be. Its predictive accuracy (as if) is irrelevant. Its value comes from its possibility (what if). Baudrillard encourages us to think of more mundane and everyday features of the world in the same way. An 'as if' masquerade may be more like the themed wild west, or the imagined world of tomorrow. When they act as simulacra, they pull us into a hyperreality where possibility opens up through fluid play between real and imagined.

Baudrillard writes: "The closer you get to perfection in simulation… the more evident it becomes… how everything escapes representation, escapes its own double and its resemblance" (1981, p. 107). There are different logics or orders of simulacra (Baudrillard 1983). Some try to abolish difference, to pass off as real. This is not helpful in educational settings, where the aim of facilitating learning is the central project. Simulation in higher education is foremost an exercise in pedagogy, not an exercise in faking something else. One can also think of equivalence, an echo – confessing the unreal while aspiring to realism. More useful are notions of what Baudrillard refers to as a third order. Here, what is simulated is no longer a counterfeit, nor an echo. Instead the relationship is reversed: the referent (the reality) proceeds from the model (the simulacrum). Third order simulacra *anticipate* the real. This is a powerful idea when we consider the future-oriented intentions in simulation pedagogy to change or improve practices, and increase patient safety and quality of care. If by simulating practice in the university we really are seeking to intervene in the future, then the third order will serve us much better than retrospective and reifying notions of the genuine fake or the good enough approximation.

The notion of the third order simulacrum holds that we can only ever simulate from the basis of models – it is only ever imagined versions of reality that provide the reference. It is not, for example, real clinical practice that shapes simulation laboratories and pedagogic design, but rather models of clinical practice, generalisations, patterns, certain idealised forms of care, practice scenarios. Simulation-based pedagogy proceeds through hyperrealities in which real and imagined practice architectures are in play.

Through Baudrillard (1983) we can short-circuit notions of the signifier (simulation) and signified (real practice). Reality is made volatile, rather than held still, captured, and re-presented. The real and imaginary are "confused in the same

operational totality" (1983, p. 150). This chimes with Crookall's (2011) account of simulation, in which the relations between reality, fiction, and the imagination are blurred. While this might be unsettling, it opens up significant potential to exploit the entangling of multiple practice architectures (such as those of clinical practice, those of higher education, and those of simulation) for unique and transformative pedagogic ends. If practices (real and simulated) do not have to mirror one another, but can instead take on other relational forms, then reproductive value can be replaced with something more open, emergent, and transformational. It is less about whether learners perform in pre-specified ways, and more about how they are changed through the experience, and how the experience changes what they do in future. To understand this, the theory of practice architectures is particularly helpful.

Theory of Practice Architectures

Questions of practices and their relationships are central to simulation pedagogy. One can immediately see how a simulation class in nursing involves multiple different practices. There are practices of clinical work and acting in scenario roles, suspending disbelief and engaging with equipment on an 'as if' basis. There are also practices of learning, of being a student in particular kinds of pedagogic relationship with the teacher and with peers. And what can we say of learning and pedagogy?

The theory of practice architectures (see Chapter 1, this volume) offers a powerful means to engage with these crucial features. It explicitly addresses questions of what practices are, how they are mediated, and how they relate to one another. The theory joins a wider movement that rejects dualisms such as mind and body, cognition and action; it recognises non-propositional knowledge, embodied and enacted through practice. This makes it particularly relevant to contexts of simulation where learning is based not on transfer of codified knowledge, but instead on bodily involvement and performance.

We may begin by recalling the view of practices as sayings, doings, and relatings (Chapter 1, Kemmis et al. 2014). Immediately this shifts our attention away from technological affordances or fidelity of particular simulator technologies, and from pedagogic protocols. Instead, simulation is seen as constituted in utterances and understandings, modes of action, and changing social and sociomaterial relationships. Simulation cannot be reduced to any one component alone: thus the theory guards against reductive analyses that artificially sift out what are (ontologically) inseparable features. These sayings, doings, and relatings do not float in an a-teleological vacuum, but hang together in a particular *project*. The project reflects the intentions and aims of particular practices (Kemmis et al. 2014). The project of simulation pedagogy is one of facilitating learning. It is more about transformation (of learners, of future practices) than it is about reproduction.

The theory of practice architectures prompts us to attend to three sets of arrangements: cultural-discursive (semantic space), material-economic (physical space),

and social-political (social space). This enables us to incorporate what is known to be important in terms of multiple dimensions of fidelity. But the architectural view does more than this. A traditional fidelity reading takes features from the real world 'out there', and maps their presence or absence 'in here' in the simulation classroom. Following Schatzki's (2002) site ontology, the theory of practice architectures dismantles the out there/in here dichotomy. At the site of practice, semantic, physical, and social architectures are instantiated and upheld. Simultaneously, they shape what unfolds in this particular moment in space and time. This allows for stability and change to be seen as co-present, co-occurring features of practice (Schatzki 2013). Simulation is constituted in its own site in which practice architectures from the clinical world, as well as others (such as practices of being an undergraduate in the university), shape what unfolds, but not deterministically. What unfolds is prefigured by these worlds, but there is always scope for difference. And these differences do not need to make some magical leap 'back in' because there is no out/in divide in the first place: a performance in the classroom is, there and then, reconstituting practices and the architectures that shape and uphold them.

Thus a practice architectural view helps to disrupt and undermine notions of fidelity, without dismissing or losing a grip of what is known to be important. It engages with what are thought to be distinctive features of simulation-based learning, while keeping a close eye on pedagogic intent. It helps us dive into simulation concretely, by following what is said and done and the fluid relationships that unfold, but at the same time, such concrete work retains wider theoretical significance.

Empirical Basis

My analysis is based on observations of simulation classes in the final year of a Bachelor of Nursing degree. The classes were conducted as part of an elective subject focusing on critical care and deteriorating patients. Two scenario-based simulation classes were folded into the semester-long subject. Each lasted two hours, and included either two or three scenarios (time permitting, the first was repeated with another group at the end of the class). Class size was between 20 and 30 students.

The scenarios make use of a 'high-fidelity manikin' (SimMan™), which has a detectable pulse and is hooked up to a monitor displaying various vital signs (oxygen saturation, blood pressure, pulse etc.; see Arthur et al. 2011). These can be set remotely from a control room, but can also respond to students' actions – chest compressions are detected and reflected in the pulse reading, for example. The manikin lies on a hospital-style bed, wearing a hospital gown, and is made up with various additions such as a wig and glasses. A name band is placed on the manikin/patient's wrist, and other equipment is available, including defibrillators, surgical gloves, telephone, and so on. Students acting in clinical roles wear relevant uniforms. A technician is based in the control room, adjusting the vital signs on display by the bedside. The tutor and/or students may also be in the control room.

Each scenario is introduced through a scenario sheet that gives information about the starting condition of the patient, and a brief medical history. The sheet also states learning objectives, and includes a brief summary of the roles involved. Versions of the sheet for the tutor and sim technician also include information about changes to occur during the simulation, such as oxygen saturation, or the introduction of ectopic heart beats. The scenarios involve a number of roles for students: team leader, two registered nurses, a triage nurse, and one or more relatives of the patient. In the scenarios discussed below, the tutor plays the voice of the patient from the control room. Students who are not directly involved in the scenarios observe their peers via live video relay in an area separated from the bedside area by a partition.

Observations and initial analysis were undertaken by a research team.[1] The first stages of analysis involved identifying a series of moments that we felt were of particular pedagogic interest. The team then considered what notions of pedagogy underpinned our identification and selection of these moments (i.e., why we thought they were interesting and how they related to questions of learning and teaching). The selected moments were then considered in terms of sociomaterial and practice theoretical concepts (see Hopwood et al. 2016; Rooney et al. 2015).

From Fidelity to Transformation

I will now discuss three moments that arose in these classes. I weave together the theory of practice architectures with Baudrillard's ideas of hyperreality and simulacra. In this entanglement I present a distinctive account of simulation, addressing the limitations and concerns outlined above, and offering a novel basis upon which to reimagine simulation, and through this, the role of the university in professional education.

Moment 1: Architectures of Clinical Practice and Pedagogy

The first moment discussed in the present chapter arose while the scenario was in full swing, marked by a change in the severity of the condition of the (simulated) patient.

> The tutor is 'acting' the voice of the patient from the control room. Watching what students are doing through one-way glass, she responds to their actions, asking what they are doing, answering their questions; she continues to cough and groan as if in pain, describing symp-

[1] Observations were conducted by Nick Hopwood, Donna Rooney, David Boud, and Kate Collier. Michelle Kelly was also part of the research team, but was the tutor for the classes discussed in this paper. Initial analyses, including identification of key moments of pedagogic interest, were completed by all team members.

> toms of difficulty breathing. After a while, the tutor glances down at her scenario sheet, and at the clock on the wall. She points to a computer monitor, and gestures to the sim technician. The technician then changes one of the vital signs. The blood pressure reading changes on the bedside monitor and the live relay screen to observing students. The acting students respond as the team leader directs them to use a nebuliser to help the patient breathe more easily.

First let us consider the action around the patient. The arrangements of clinical practice are evident here. Its cultural-discursive 'reality' is invoked through the tutor groaning *as if* patient. The students ask questions of and give answers to the manikin in ways that constitute and confirm the manikin *as if* it were a patient, and themselves *as if* they were clinicians. The doings are doings of clinical practice, too. The students observe and interpret the blood pressure readings, and take actions in response to them, applying a nebuliser to the 'patient'. In the social-political domain, the students relate to one another in their assigned clinical roles – as team leader, registered nurses, and so on. Their relationships with the tutor temporarily suspend the traditional student-teacher formation, and instead take on a clinician-patient form. And their relationships with the equipment produce material-economic arrangements as 'live'. The manikin itself, the manikin's voice, and the bedside monitor suggest a body that is vulnerable, experiencing pain, demanding action; the nebuliser is a device to help meet these demands. It is *as if* the economy of time in preserving life is real.

This is not simply clinical reality from elsewhere and the past that has been imported in or recreated: it is clinical reality produced here and now at this particular site through particular sayings, doings, and relatings in response to particular cultural-discursive, social-political, and material-economic arrangements. Despite the appeal of simulation because it keeps 'real' patients from harm, the practice architectures of clinical practice only come into being through practices that proceed *as if* harm could indeed happen to the 'patient'. Deliberate moves away from the 'real' (real pain, real harm) rely on further diving into the realm of the imaginary. This imaginary work simultaneously produces the fiction of the manikin as a patient with real demands, and needs. It is as much *what if* as *as if.* But, the sayings, doings, and relatings that ensue are no less real than those in any ward.

Other architectures are in play, too. In the control room, the tutor is both patient *and* tutor. Her glancing at the clock and the sheet are doings that remind us this is a class with limited time, and a pedagogic purpose. The material-economic arrangements of teaching are significant. The sheet is an instructional guide, and the clock points to the temporal economies of timetabling. At this point the project reasserts itself. While previously the tutor had focused on supporting students in stepping into the simulation, now her responsibilities to keep the scenario on time and ensure key learning objectives come into clearer view.

It is not simply that the practices and related practice architectures appear in sequence. Rather, pedagogic practices are ecologically related to other practices. The tutor and technician bring about the change in the patient, prompting actions by the students that align with learning objectives. The tutor's signal (saying) is taken up in the technician's response (doing) in a coordinated relation. And so the acting

practices and clinical practices around the bedside form an ecology with the pedagogic and technical practices in the control room. The learning value of what unfolds around the bed cannot be separated from its bundling with these other architectures. The logic of simulation as mirror is inadequate here. Rather what we see is the production of learning experiences through practice architectures of multiple, interdependent practices.

Moment 2: If She Had Been Real…

Moment 2 emerged in a debrief discussion in the plenary area, after a scenario in which the patient, Aaron, was deteriorating, and the clinical team tried to ascertain from his girlfriend if any drugs had been taken. The material arrangements are different here – the bedside is behind the partition, the main screen is blank, and the observers have turned around, away from the screen, to face the acting students who have taken seats at the back of the plenary area.

Tutor: So Aaron's girlfriend was by his side most of the time.

Student: I think we did really well to try and reassure her. Actually it keeps you on track and makes you realise you need to be explaining as you go along. Probably if she was a real girlfriend and knew what they'd been doing that night, you'd probably utilise her more and maybe take her – as a Team Leader, I might have taken her aside to have a chat and say, can you talk me through the night.

Here we have moved away from the 'heat' and seductive pull of action around the bedside. Student-teacher relationships take primacy again, replacing those of clinician-patient from moments before. The social-political arrangements of teaching/learning practices reassert themselves. The tutor is facilitating the debrief, and her questions and comments prompt responses from the students. This arrangement instantiates familiar pedagogic discourse. Interestingly, some of the sayings carry forward from the scenario to this present: the student speaks as a team leader and refers to the girlfriend not her peer's real name (echoing the tutor's sayings). The cultural-discursive and social-political arrangements of the scenario are not fully absented, even though its materialities are now hidden from view by the partition in the room.

This was one of many moments, in both the scenarios and the debriefs that followed them, where 'unreality' was spoken and/or acted into being. Practices ventured away from 'as if' to 'what if'. Here, it is the comment 'if she was a real girlfriend', pointing to the fact that the acting girlfriend hadn't actually been out at night with the patient. At other times, there were moments of awkwardness or giggling as the *acted* rather than *enacted* nature of the bedside practices were foregrounded. The architectures of role play, of being a student, and of equipment that is realistic but still fake and displaying mechanical or technical limitations, intrude.

Just as the adage 'the map is not the territory' points to the fools' errand of the evermore detailed map, so the 'as if' logic of simulation inevitably breaks down.

Has the simulation collapsed? Our answer depends on what we see as the project governing the practices, their associated practice architectures, and the ways these hang together. If the aim in simulation is to simulate, to help people step out of one world and into another, to suspend disbelief, to experience and become immersed – materially, bodily, affectively – in particular practices, these moments signal breakdown. The manikin *as if* it were a patient ceases to be. Maybe the role of girlfriend needs more detailed scripting. Perhaps the student was not a convincing actress, or struggled to improvise in ways that maintained a seamless clinical reality.

But what if this is hyperreality: not a simulation, but a simulacrum? Then there is no 'real girlfriend' referent to concern us. There is no mirror to shatter. We think instead about the productive, transformative play between real and imaginary, past, present, and future. Here, we can see how the pedagogic project remains intact, and in fact is served by the intrusion of the unreal girlfriend into the semantic space of the debrief. The student's comments enter into a 'what if' imaginary, where alternative scenarios and eventualities are considered. They go beyond the scenario that has just been enacted, and anticipate clinical practices at other times and spaces. In doing so, the student transformed the breakdown into a resource. The unrealism of the scenario provided a catalyst for sayings that extend the imagination. Indeed later, the student who played the role of the girlfriend asked, "Could they have taken me aside and asked me?" The student reflected on practice (what has just happened), and linked this with her professional knowledge to think what might have been different. If simulation is purely about soliciting, rehearsing, or demonstrating embodied performances, this one has fallen short. But if it is about students coming to say, do, and relate in ways that inform their practice, sharpen their attention, and create meaningful, embodied connections between their actions and knowledge, then this moment can be counted as a success. This transformative potential arose precisely through the break from reality, venturing into imagined realms beyond the fiction of the plastic patient and his fake girlfriend.

Moment 3 – Do You Know What You're Doing?

The third 'moment' happened by the bedside, and was also revisited in the subsequent debrief. Notice the material set-up in the dry plastic hand, the ECG, the microphone that allows the tutor to ventriloquise the voice of the patient:

Patient [tutor]:	Is the doctor coming?
Team Leader:	Yes the doctor is coming to have a look at you.
Nurse 1:	[Touching the manikin's dry plastic hand] He is quite sweaty and clammy.
Team Leader:	Clammy.

There is a pause, and some hesitant action by the acting students.
Patient: Do you guys know what you're doing?
At this point the actors around the bedside laugh and glance at each other.
Team Leader: Yes we do. Where are we up to?

More laughter, as if his second comment undermines the first.

Team Leader: Does the ECG look normal?
Later, in the debrief:
Team Leader: I think it's very humiliating when your patient says 'guys do you know what you're doing?'
Again, laughter.
Team Leader: You have to build a trust relationship between nurses and you have to show that you know what you are doing.
Nurse 1: Even if you're nervous, you have to stay calm… the patient is already anxious about their own situation and if the nurses are really nervous, I think it would put more stress on the patient.
Tutor: Yes, so we have to be really conscious of our body language and our facial expressions, as nurses. Even if we don't feel 100 % confident yet, we don't want the patient to know that. If you don't know what you're doing, you're definitely getting help from someone who does. So it's about being able to recognise your limitations. And prepare your answer when that happens to you in clinical [practice]. You'll be asked it at least once: do you know what you're doing?

There is much to be said here. The students touching the manikin's hand are enacting a disconnect between doing and saying in order to uphold the simulation: the touch is dry, but the speech reports clammy hands. The real and the imaginary collide. The uncertainty experienced by the students was perfectly real. We can see here how imagining is not just a cognitive act, existing only on an ideational plane. The imagining here is a whole-of-body act. The touch of the dry plastic, living with the rupture between doing and saying, the projection, and anticipation of what might come next ('what if' surfaces again): these are all bodily, affective, cognitive, and psychomotor in nature.

The tutor's intervention 'do you know what you're doing' was revisited later in the debrief. It linked to specific cultural-discursive and social-political dimensions, based on generalisations and expectations that are highly likely to arise in these students' early experiences after graduation. Invoked here is a model that suggests patients might question clinical competence. This saying was in some ways confronting, and it brought a shock and intensity into the scenario. This had an immediate effect: the team leader regrouped, and spoke out loud his thoughts, going through the clinical protocol, referring to the monitor to check the heart beat. The tutor reminded the actors and their audience of observing peers that they are not (yet) real clinicians, but in doing so pulled them further into the simulated action.

The same saying had a different effect later, in the debrief. Here it became a trigger for a discussion about the management of uncertainty in clinical practice, rais-

ing the possibility that these students might be challenged by patients in this way even when they are qualified. The tutor steered the debrief discussion to highlight emotional labour – presenting a confident, secure 'face' to patients, even when, as nurses, they might be nervous. She also took the opportunity to relay a crucial point about seeking help: another moment of transformation. This is extremely important, as students will never be fully prepared for all the eventualities they experience in practice, and thus part of 'preparedness' includes the ability to discern situations where another knowledgeable professional is needed (see Hopwood et al. 2014; Rooney et al. 2015).

This whole sequence reflects a complex interplay of the practices architectures of the various practices being enacted in the moment. The niche of simulation pedagogy emerges through fluid, interdependent relations between clinical practices, practices of simulating, and those of teaching and learning. Folding these together is the bodily work of imagining, both on 'as if' and 'what if' bases, the latter maintaining the pedagogic project when the former is ruptured. Within a project of pedagogy through hyperreality and simulacra, these relations constitute rich learning experiences. Real experiences – past (even just moments ago, as when the debrief refers back to the scenario), present (the emotions of the moment), and future (the likely challenge to career nurses' competence by patients in the early career) are brought into presence through sayings, doings, and relatings. The plastic hand is constituted as sweaty through a productive disconnect between doing and saying, drawing simultaneously on practices and practice architectures of clinical work and those of role-play, while the protocols and reference to the ECG are more synergistic. In the debrief, the architectures of pedagogy are stronger (familiar tutor-student relations resurface), but there remain traces and intrusions from the action that has just finished.

Conclusion: Reflections on Where the Concepts Have Taken Us

I have shown how multiple architectures of clinical practices and pedagogy and their fluid ecological relations within the scenario and debrief constitute a hyperreal niche, producing the simulation activities as simulacra. Through these practice architectures and the shifting between them, the students and tutor, nurses and patient, journey to and fro between the real and imaginary. The 'as if' logic is fragile, and frequently ruptured. However, the pedagogic project goes on, rescued by 'what if' work, accomplished through bodily imagination, and imaginary bodily performances. These journeys are characterised more by transformation than reproduction. What is real is as much here and now as it is a recreation of something out there. What is imagined is as much the world of clinical practice as it is the pain experienced by the plastic manikin. The real work of the simulation is the constructive and transformative enactment of imagined clinical practice. This imaginative

work is held in place by a no less real, and skilfully-performed pedagogy of simulation, including careful preparation, the simulation activity, and the debrief. Despite the cold, lifeless feel of the manikin's plastic hand, its imagined pain readily stands in for the empathetically understood pain of the real patients these nurses will soon encounter in their future practice.

Students' experiences are defined, and valuable, not by virtue of their degree of realism or fidelity to an undefined 'clinical practice' said to be real, nor by unrelenting maintenance of such fidelity through unbroken suspension of disbelief. Instead, the pedagogic value of simulation lies precisely in movement across architectures, not necessarily in clean or linear sequence. It is in the intrusion of the unreal into the real, the imaginary and the fictional colliding with the world of consequence, pain, experienced as a confrontation with uncertainty. Simulation enables a distinctive and valuable venturing into 'what if' scenarios in a way that concretises the ethereal, embodies the cognitive, and entangles the psychomotor and the affective. 'What if,' in the moment of action around the bedside, or during the debrief, opens up possibilities for imagination that is performed bodily, 'stepping into' cultural-discursive, social-political, and material-economic arrangements simultaneously. These are not 'just' the arrangements of 'real' clinical practice. They are more than that. They are hyperreal.

If we are to achieve what Norman (2014) asserts is needed for simulation pedagogy to mature, then alternative visions are needed. The combination of practice architecture theory, with Baudrillard's notions of hyperreality and simulacra, provides a fertile means to do this. This approach unshackles simulation from ossified notions of the real, and the conservative reproductive value that silently partners any discourse of fidelity. By embracing the unreal, and fluid play between real and imaginary, simulacra can not only draw from worlds of clinical practice and pedagogy, but can infect them. A pedagogically rich moment can unfold and be exploited for all its unreal, fake, and fictional qualities. Practice can be anticipated, confronted, and, yes, changed by letting go of a tight grip on a 'real' referent and a pre-specified notion of complete, appropriate performance.

And here the theory of practice architectures bears fruit. It inherently lends itself to disrupting dominant notions of simulation pedagogy, and to enriching the theoretical basis for this field, given its occupation with practices and their relations. It provides a bridge between Baudrillard's highly general (yet generative) concepts and concrete actions in the classroom. This approach enables the complex worlds of simulation (simulacra) to come into new clarity, and fall within our empirical grasp. It does so by providing a focus on sayings, doings, and relatings, and the practice architectures with which they are enmeshed, and offering a language to describe connections between practices. The theory of practice architectures contributes to a wider project, a critical intervention and a disruptive opening up of new ways to describe the world. The site ontological basis of this work proves valuable in the particular context of simulation pedagogy. Gone are distinctions between a stable reality 'out there' and a more or less faithful fake or reproduction 'in here'. We can, finally, let go of metaphors of the mirror and reflection, and instead dive into the

entangled worlds of real and imaginary, practice and education, university and the professions. From 'as if' to 'what if', the theory of practice architectures can help to build distinctive visions for practices where pedagogy and work no longer require a bridge between them.

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Chapter 5
Infants' Practices: Shaping (and Shaped by) the Arrangements of Early Childhood Education

Andi Salamon

Abstract Research about infant pedagogy is often restricted to educators' espoused beliefs and interpretations, with a limited view into how those beliefs might be enacted in practice and potentially impact on babies' lived experiences. This chapter examines infants' practices in early childhood education (ECE) contexts, and the arrangements of ECE practice that enable and constrain them. Drawing on data generated from the author's doctoral study, the chapter considers the conceptions of educators as among the practice architectures which shape infants' practices. How educators' conceptions of infants' capabilities manifest in their *sayings*, *doings*, and *relatings* is briefly explored. The primary focus on infants' subsequent practices reveals the potential impact of the practice architectures of ECE on opportunities for babies' learning, and adds to existing literature about infants' lived experiences in ECE settings. Infants' practices are not only shaped by the practice architectures of ECE, they also shape the practices of educators and, so, the practice architectures of their particular setting. Implications for the agency of infants in actively contributing to their lived experiences in ECE settings are discussed.

Early childhood education (ECE) settings are particular places in educational systems prefigured by particular histories of infant care and education. Though sharing general aims with primary, secondary, and tertiary education systems, many of the arrangements of ECE are unique, generating unique early education practices. For example, discourses of motherhood and the 'image of the child' act as pervasive cultural-discursive arrangements in ECE that shape pedagogical practices in particular ways (Salamon et al. 2015). Also, infants' developmental dependency on adults to meet their basic needs means that a significant part of an educator's practice in ECE involves physically tending to infants in routine *doings* based on sleep times, meal times, and toileting practices (Rockel 2009). Such unique arrangements

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enable and constrain early childhood (EC) educators' practices, which, in turn, impact on babies' lived experiences, conceptualised in this chapter as practices.

In this way, EC educators' practices are among the practice architectures that enable and constrain the babies' practices in ECE settings. As Kemmis et al. (2014) state, "practices make paths, on the one hand, and, on the other, … the practice of walking paths, whether paths … already laid down or trails we blaze for ourselves, also makes us" (p. 90). Drawing on data from my doctoral study, this chapter examines the paths that educators' practices can make in ECE contexts and how infants walk those paths. More importantly, however, it also explores the paths that infants' own practices create in ECE settings. I argue that babies' practices shape educators' practices, and highlight how educators' erroneous conceptions of babies as incapable of independently regulating their social and emotional experiences can potentially limit opportunities for babies' learning.

The chapter has three main parts. The first part provides a background discussion of literature regarding educators' conceptions; an explanation of how babies' experiences are conceptualised as practices with links to the theory of practice architectures; and an outline of the nature of the study. The second part explores the manifestation and impact (on babies' practices and learning) of EC educators' conceptions about infants' capabilities, with two extreme cases contrasted. Showing how educators' conceptions (of babies as more and less capable of independently managing social situations) are part of the practice architectures for the babies' practices, and that they therefore have implications for infant learning, this part also discusses other relevant practice architectures such as attachment theory and the focus educator system. The third part of the chapter uses the story of one baby, Sophie, to show how babies' practices can shape the practices of educators, and can therefore be part of the practice architectures that shape educators' practices. The discussion challenges the notion that babies are less capable of managing their emotional experiences independently. The chapter concludes with some final thoughts regarding implications for professional learning of EC educators, and the shaping of infants' dispositions and opportunities for learning.

Educators' Conceptions of Infants' Capabilities

There has been important research into preschool and school education showing that the conceptions educators have of preschool and school age children's abilities can influence the ways they interact with those children (Dobbs and Arnold 2009; Rist 2000; Zinsser et al. 2014), and that this can have implications for children's educational experiences (Ready and Wright 2011). Research regarding early childhood educators' conceptions of infants' capabilities, in contrast, is scarce, and many have argued that infants' social capabilities have long been underestimated (Howes and Toyan 1999; Rubin et al. 1999; Salamon 2011). Indeed, McDowall Clark and Baylis (2012) referred to an assumed "incompetence of infants" (p. 232). This is reflected in work by Recchia and Shin (2010) who described student teachers'

surprise at infants' physical and communicative capabilities and a subsequent 're-thinking' of their beliefs about what infants are capable of. Recchia and Shin (2010) consider the results of their study "created opportunities for early childhood pre-service teachers to re-think their existing beliefs about infants' capacities and capabilities" (p. 143).

A study by Davis and Degotardi (2015) is, to the best of my knowledge, the only research that examines early childhood educators' conceptions of infants' social capabilities. Among their mixed findings, and contrary to the suggestion that infants' social capabilities have been underestimated, educators acknowledged a wide range of infant social capabilities. Inconsistencies, however, were found between educators' beliefs and their reported practices. These inconsistencies were considered a result of the "implicit and pervasive beliefs" (Davis and Degotardi 2015, p. 11) educators hold about infants, and the authors highlighted the importance of investigating educators' views alongside their actual practices. This chapter does this kind of work and more: it examines educators' conceptions alongside their practices (more specifically how those conceptions are manifested in educators' practices), the practice architectures those conceptions both become and create, the practice architectures that create such conceptions, and the impact of this on babies' own practices.

Researching Infants' Lived Experiences and the Theory of Practice Architectures

There are always parts of children's experiences that are impossible for researchers to understand, and insights into infants' perspectives are especially problematic given their limited verbal communication (cf. Elwick et al. 2014; Salamon 2015). Furthermore, as I have argued elsewhere (Salamon 2015), possibilities exist for misinterpreting observations of infants because they cannot confirm or deny researchers' findings. However, means other than interpreting verbal communication can be used by researchers to gain insights into babies' lived experiences.

One way of achieving this in ECE settings is to incorporate the holistic bodily expressions of infants and pre-verbal children into research design (cf. Nyland 2009; Rossholt 2009; Shin 2010; Sommer et al. 2013). Infants' bodily expressions can be seen as points for researchers (and educators) to gain deeper insights into the babies' lived experiences. Another way is to treat the research as an open-ended co-production of accounts of infants' lives that examine the interconnectedness of various elements (such as other children, spaces, materials, and adults[1]) in the setting (Bradley et al. 2012). Such an approach is consistent with the notion of infants'

[1] See Stratigos (2015), for example. Stratigos (2015) described the interconnected nature of other children, spaces, materials, and adults (including herself) in an infant's desire to 'belong'.

experiences as "ways of being within the social, cultural, and physical spaces of their early years environment" (Sumsion et al. 2011, p. 114).[2]

In the research reported here, I examined both the interconnectedness of various elements (including aspects of social, cultural, and physical spaces of the learning environment) and the observable bodily expressions of infants in a particular ECE setting in order to better understand babies' lived experiences in that setting. I did so through the lens of the theory of practice architectures believing that, although qualitatively different from the lived experiences of older children, babies' lived experiences can be conceived of as *practices*, and that the discursive, physical, and relational environment[3] the educators establish in ECE settings through their practices become the framework within which the infants themselves experience ECE.

According to the theory of practice architectures, practices are socially established human activities involving utterances and shared forms of understanding, modes of action, and ways of relating, referred to respectively as *sayings*, *doings*, and *relatings* (Kemmis et al. 2014; see also Mahon et al. (2017), Chapter 1, this volume). Babies' *doings* and *relatings* might be easily recognisable in the form of actions. However, given infants' limited capacity for using recognisable words in their communication, clarification is needed with regard to babies' *sayings*. Similar to Rossholt's (2009) account of infants' bodily practices, Green and Hopwood (2015) reflect on elements of speech as a precise embodied practice:

> lips and tongue in movement, and the musculature of the throat, breathing, the head itself, and relatedly, its associated gaze-work, the eyes and the senses more generally …. What people *say* and what they *do*, in practice, in its enactment and realisation, are quite fundamental then. (p. 19)

It could be argued on this basis that babies' *sayings* are 'spoken' in the form of embodied and vocal communication through, among other things, gaze, facial movements, and intensities and types of cries. It was this understanding of babies' *sayings* that informed the ways in which babies' practices were analysed in the study reported in this chapter.

The Study

The study had two main aims. The first aim was to identify and examine practices and conceptions of educators working in an infant program in the inner western suburbs of Sydney using a collaborative research approach. The second aim was to consider how educators' practices (as manifestations of their conceptions of infants' capabilities) impact on babies' lived experiences in ECE contexts. I chose to do this by identifying the ways that educators' practices came to be amongst the practice

[2] For more detail, see the study by Sumsion et al. (2011) of what life is like for infants in Australian ECE contexts.

[3] The 'cultural-discursive, material-economic, and social-political' environment in the theory of practice architecture terms.

architectures for the babies, and to examine how these arrangements prefigured the babies' practices in ways that enabled and constrained babies' opportunities for learning. I visited an ECE setting for three half days a week for 6 months to observe the typical practices of both the educators and the infants. In all, there were seven infants who attended regularly through that period of time and five permanent educators, all of whom participated in the study.

Data were generated from digital photographs, video, written observations, and existing pedagogical artefacts from the site, such as educators' observations and programming notes. The data were then presented and discussed in group discussions with educators. The theory of practice architectures was central to the collaborative process of generating and analysing data about practices and conceptions with educators in the group discussions. Use of the 'Practice Architectures Map' (see Salamon and Harrison 2015), a simplified diagram of the theory of practice architectures, offered an external, shared conceptual point of reference that was used to deconstruct educators' practices, and examine their underlying conceptions.[4] The data generated from transcripts of the discussions, observations, and artefacts were organised into cultural-discursive, material-economic, and social-political arrangements and *sayings*, *doings*, and *relatings*. Iterative analysis of the data was undertaken with educators during the data collection period. Additionally, a secondary meeting with educators was organised to check the validity of inferences drawn from the evidence, and to ask further questions about ideas that emerged from the transcripts.

A summary of the findings regarding educators' conceptions of infants' capabilities highlighted how particular cultural-discursive arrangements influenced the material-economic and social-political arrangements of the setting, which, in turn, manifested in particular practices (Salamon and Harrison 2015). A cycle of self-perpetuating outcomes was said to occur when educators believed infants to be more or less capable of different types of independent learning, i.e., the belief was translated into practices that either enabled or constrained opportunities for babies to practise (and so be more or less capable of) independent learning. For example, educators' conceptions of babies as capable of independent physical learning would result in practices that enabled opportunities for babies' independent physical experiences. Given that, as Mahon et al. (2017) suggest, the effects and consequences of one practice can shape others, it becomes clear that the educators' practices can become practice architectures for the babies' practices, and vice versa. While Salamon and Harrison (2015) touched on conceptions of infants as more and less capable of independent social engagement with peers, educators' practices that emerged out of these conceptions were not identified and only incidental mention of

[4] The 'Practice Architectures Map' was central to the participatory process of generating and analysing data with the educators. Created with a methodological attitude of ethical symmetry (Christensen and Prout 2002), the map served as an external and shared point of reference in the group discussions. Educators received information regarding the theory of practice architectures and a copy of the map with the intention of making the conceptual framework of the research accessible to them, and enabling their participation in the research process. The map was printed, enlarged, and eventually laminated, and was placed centrally during the group discussions.

the observable outcomes for the babies was made. The evidence of the research reported here develops these ideas further.

In the next part of the chapter, I show how the cultural-discursive arrangements that prefigure the educators' practices, such as conceptions of infants as more and less capable, do in fact play a role in constraining and enabling the babies' practices. Specifically I examine two contrasting conceptions: (a) babies as less capable of independent social and emotional learning, and (b) babies as more capable of independent social and emotional learning. I discuss each in turn, highlighting how the conceptions are manifested in the *sayings*, *doings*, and *relatings* of the educators, and how this appeared to impact on the babies' practices and their opportunities for learning.

'Gentle Hands' – Educators' Conceptions and Practices

There seemed to be a distinction in the ECE setting between educators who regarded babies as capable of managing their social experiences independently and those who saw babies as less capable of independent social interactions. This is significant because, as I show in this section, these conceptions appeared to be prefiguring ECE practice in enabling and constraining ways.

A conception of infants as less capable of independent social engagement with peers has been a pervasive cultural-discursive arrangement in ECE, as mentioned. The following scenario, taken from an observation of an interaction between infants, Billy and Sara, and EC educator, Tamara, (recorded via a combination of field notes and photographs) shows how this conception can manifest in educators' practices:

> Ten-month old Billy approaches Sara, who is falling asleep on the mat. He reaches down and pats her on the back, then holds on to her jumper and pulls a little, smiling. He reaches up and moves his hand towards her face, smiling still. An educator catches sight of him and calls out to him in alarm "Billy, stop!" She quickly moves to where Billy is still reaching for Sara's face, and pulls his arm away with a full grip around his elbow. She sits beside Billy, as he continues to look at Sara, steadily, with her hand restraining his arm while saying "Gentle hands, Billy you have to use gentle hands".

This excerpt highlights the practices of an educator, Tamara, who believes infants are less capable of managing social situations effectively, and who seems to have assumed that the approaching baby was going to hurt the child lying on the floor. The educator intervened in a way that suggests a 'deficit view' (cf. Davis and Degotardi's 2015, discussion of deficit views of infants in social situations). The educator's *sayings* were tinged with urgency and were reinforced by quickly removing Billy's hand from Sara. Restraining Billy's hand, as both a *saying* and *doing*, reflects a way of *relating* that brings to light the educator's use of power as a form of containment of the babies' mobility. Leavitt (1994) refers to this containment of young children's mobility as a way that educators exercise power in their work with infants.

Though it is never possible to be completely sure what a baby is learning, it *is* possible to reflect on the way these aspects of the educators' practices establish arrangements that prefigure the babies' practices and opportunities for learning. The educator was most certainly acting out of good intentions, namely, 'protecting' Sara. However, with Billy being suddenly and abruptly held back from interacting with Sara and having his hands restrained as he did, I wonder what opportunities for learning (i.e., about having 'gentle hands' when interacting with other babies) might have been lost.

Some EC educators in the setting conceived of babies as capable independent social actors. This was evident in, and seemed to influence, the ways in which educators responded to interactions between the infants. The following notes from a video observation capturing an interaction between two babies and educator, Nella, offer an example. Nella's conceptions of infants as socially capable were clearly manifested in her *sayings*, *doings*, and *relatings*:

> Ten-month old Kian is standing at a table with 13-month old Aiden and 12-month old Penny, looking at pictures together, with an educator sitting nearby and engaging with them all. Kian touches the back of Aiden's head, looks at his hand, then clenches his fist with a handful of hair inside it. Aiden brings his head forward, then lifts it back up and looks at Kian. Kian bends his head forward so their foreheads touch and lets go of his hair. Aiden pushes his head against Kian's then stands up and brings his hand up to where Kian had hold of his hair and vocalises. The educator has been watching and moves her left hand closer to Kian, repeats the vocalisation saying "Ohhh, what happened, was he touching your hair?" and then laughs gently.

The *doings* of the educator in this situation – i.e., closely observing the interaction between Kian and Aiden, and waiting to see how the interaction unfolds – provide a sense for her conceptions about babies' capabilities. This presents a stark contrast to the *doings* of educator, Tamara, in the earlier extract. Rather than rushing in to stop Kian from holding Aiden's hair, possibly diverting a stressful situation for Aiden, Nella watched and waited, and only added to the exchange by saying "oh …" after some time. Her fine observation, and her watching and waiting, suggest that she saw Kian and Aiden as potentially capable of managing the situation, although she was on hand if more support was needed.

As the interaction continued, the provision of more subtle support, both physically and verbally, was evident:

> Kian leans into Aiden putting his head on Aiden's shoulder, and the educator loosely takes hold of Kian's wrist with her left hand, smiles and then laughs gently again saying "Oh ho ho, what you doing, you pushing him? Are you pushing him?" in a light good-humoured tone. Kian continues leaning against Aiden, who has put his arm around Kian and is letting him lean against him. The educator takes hold of Kian's upper arm with her right hand while she shifts her position, and ends up supporting both children from behind. She continues to smile and looks at Kian saying "You want a cuddle? You want a cuddle from Aiden? That's a nice cuddle", Kian leans more heavily into Aiden's body. The educator says "Oooooh" and giggles softly, looking at Kian and myself. Aiden continues to allow Kian to rest his weight on him, while Kian looks up at the educator with a half smile. The educator moves her head and says with a big smile "Very nice cuddle, thank you Aiden". Kian smiles again, and again she giggles gently.

In both this excerpt and the previous one, the *sayings* of the educator take on a particular form, namely 'mind-mindedness' talk. 'Mind-mindedness talk' is "the tendency of adults to ascribe mental states and processes when describing infants' behavior" (Degotardi and Sweller 2012, p. 253). In this case, Kian's action was explicitly interpreted by the educator as 'Kian wanting a cuddle'. The previous action was interpreted as 'Kian touching Aiden's hair'. According to Degotardi and Sweller (2012), responding to infants' mental states by speaking to their current perceptions, goals, and understandings may contribute to stimulating infant learning. According to this line of argument, by questioning Kian's motives and actions, this educator was engaging in communication that acknowledged and extended Kian's thoughts and feelings.

The educators' tone, smiling, and laughter is also significant. Given the potential for infants to tune into, and be affected by, adults' emotional responses, Nella's lighthearted way of relating added to the positive tone of the interaction. The final part of this interaction highlights this further, as, even when Kian was visibly upset by the ongoing actions of Aiden, Nella used her calm and even tone in what appeared to be efforts to relate with both Kian and Aiden:

> For no apparent reason, Kian begins to cry. The educators' face changes to a concerned look and she says "What happened? What happened?" as Kian begins to cry more heavily. Aiden kisses Kian on the head. The educator looks at Kian and nods and says with a sympathetic tone "That's a very big cuddle. Thank you Aiden very much for the big cuddle, yes. Yes", while moving her hand under his armpit and supporting him physically again. Kian begins to 'settle' and his crying eases. Aiden then taps Kian on the head once, and Kian begins to cry again. The educator softly and evenly says to Aiden "Oh, thank you, thank you" while Kian continues to cry. Aiden taps Kian on the head again and he cries harder, while the educator says calmly and soothingly "Gentle, gentle hands" and looks at both Aiden and Kian in turn. "I think he don't like it".

The interactions between Kian, Aiden, and the educator (Nella) highlight the particular *sayings*, (i.e., 'what you doing', smiling and laughing, 'you want a cuddle', 'very nice cuddle', 'thank you Aiden', 'gentle hands', 'I think he don't like it'), in combination with particular *doings*, (i.e., questioning, closely observing, supporting first Kian and then both children physically, repeating the children's vocalisations, using her open hand to reinforce her words if needed), and *relatings* (i.e., relating with humour, ease, interest, concern, calm, sympathy, gentleness, steadfastness) of an educator who believes infants are capable of actively understanding and managing social situations.

The educator appeared to be creating practice architectures that enabled opportunities for Kian's and Aiden's learning about their own psychological states, and eventually those of others, and learning about active social interactions and the range of their own feelings within those interactions. For example, given the space to learn from his experience, Kian might have learned that it is okay to touch and hug another child with interest, and in turn be touched, even though it might have become unsettling for a moment. From the same interaction, Aiden might have had the chance to become a little more skilful at using his 'gentle hands', through learning what kind of pressure is too much.

These contrasting social interactions demonstrate that conceptions educators have of babies' capabilities matter in ECE because they influence practices that constitute the practice architectures prefiguring the opportunities for infants' learning. In the first example, the educator (Tamara) thought the babies to be less capable of managing the social situation independently. Rather than watching and waiting to see what Billy would do, all the while being ready to act if needed, the educator acted quickly and abruptly. In this instance, the conception of babies as not capable of managing a social situation independently was associated with a quick intervention and a sense of urgency. In the second example, the educator (Nella) believed the babies to be more capable of managing their social interaction independently. Though she was always watching and waiting to act, the educator did not intervene in the social interaction until she needed to, i.e., when Kian became upset about being tapped on the head. In Nella's case, a conception of babies as capable of managing a social situation with a degree of independence manifested as mind-mindedness talk, giving babies more space through waiting time and observation, and a calm approach. As made evident in each of these examples, the practice architectures created through the educators' particular practices clearly enabled and constrained very different opportunities for social learning.

An analysis of the salient practice architectures in the setting pointed to some cultural-discursive arrangements that might account for, and might have been reinforcing, these contrasting conceptions. One, as suggested above, is a deficit discourse regarding babies' capabilities. Another is what the educators have been taught. An educator in the setting, for instance, talked about being taught that infants do not engage in collaborative play until they are older. The following excerpt from a transcribed meeting highlights her point:

> That's something that we've been taught, that children don't properly interact until they're much older … You know all the stages of play, we start to think of solitary play and parallel play and collaborative play.

The discussion of the difference between what educators have been taught about infants' social capabilities and what they see before them in the everyday life of ECE settings, highlighted how practice architectures can constrain emerging practices of all those involved.

The focus educator system also seemed to be an important practice architecture (see Salamon and Harrison 2015). This system, which involved the pairing of each infant with a 'focus educator', was underpinned by attachment theory, and the belief that infants need the emotional consistency of a permanent caregiver who undertakes all the routine *doings* throughout the child's day at the centre, for example, nappy change, mealtimes, and bedtimes. Attachment interactions are being examined more closely in the ECE literature (Page and Elfer 2013) and researchers are rethinking the implications of integrating attachment theory into ECE curriculum (Cortazar and Herreros 2010). Also, Salamon and Harrison (2015) reported on educators who took the view that babies might be more sociable when exposed to people other than their 'focus educator' with whom they had strong attachment relationships. Nevertheless, attachment theory, via the ECE centre's focus educator

system, was clearly influencing educator practice in the setting studied. Another salient practice architecture for the educators' practices was the babies' practices themselves, whereby the actual *sayings*, *doings*, and *relatings* that babies enacted, had an (often profound) impact on the educators' subsequent practices. For some of the staff, what the babies did challenged what the educators were taught about play and learning. The following excerpt from a group meeting highlights this:

> I mean look at that, that was a clear interaction between Kian and Sophie, which goes against what we've been taught, that children don't properly interact until they're much older … What we're seeing right now isn't solitary play,[5] there's a clear interaction there.

In the next section, the impact of the babies' practices on the practices of the educators is explored further through the interactions of a 9 month old infant, Sophie, with both her focus educator and another educator with whom Sophie was very familiar. The interactions highlight not only how different conceptions manifest differently in educators' *sayings*, *doings*, and *relatings*, but also how babies can manage emotional situations and exercise agency through their practices.

'What's Wrong with Sophie?' – Babies' Agentic Practices Shaping and Being Shaped

During my visits to the setting, I observed a series of interactions involving Sophie and several EC educators, including her assigned 'focus educator', Laura.

In the following written observation, Laura was left alone on the verandah with three babies, one of whom was Sophie. Sophie's agentic emotional practices, within the arrangements co-created with her focus educator Laura, are evident:

> An educator goes to put her focus child, Sophie (9-months old), down on the floor so she can attend to another child, Timmy, who is crying. Sophie begins to vocalise in a 'whiney' way, crinkling up eyes and face suggesting she is not happy and making crying type sounds. The educator says, "I'm just going to get Timmy, look he's upset," and makes a move toward Timmy, but Sophie continues to make her 'unhappy' faces and sounds and the educator picks up Sophie again. Sophie stops the 'unhappy' signs, but Timmy continues to cry and another child, Kian, begins crying too. The educator makes moves to leave Sophie again to attend to Timmy and Kian, and the same thing happens three times, that is, the educator tries to leave Sophie and returns when Sophie makes her vocalisations and faces. In the end, the educator is trying to manage three partly upset children on her lap. Following this, Sophie sits on the educator's lap for an extended period of time.

Sophie's *sayings* included her facial expressions and the different vocalisations and crying type sounds she used to call out to her focus educator. The focus educator's conceptions of Sophie as less capable of independently regulating her feelings, and rather needing the educator to do so, are evident in her *doings* of repeatedly bringing Sophie onto her lap. However, Sophie's vocal acts seem more communicative and among the range of 'fake cries' identified in research by Nakayama (2010) and

[5] See Parten (1932).

Chen et al. (2009): Sophie was actively using sophisticated crying type behaviours, part of the dynamic (or social-political arrangements) Sophie had co-created with her focus educator.

In her interactions with other educators, Sophie enacted similar *sayings*, i.e., facial expressions such as crinkled up eyes and face, and crying type vocalisations. However, she was met by different responses and different ways of relating, and thus, the unfolding (co-created) practices were different. This is exemplified by Sophie's actions during one of Laura's breaks. After Laura left for her break, Sophie 'grizzled' on and off, with first a casual educator, and then a permanent educator who moved Sophie on and off her lap for about ten minutes:

> Another permanent educator comes onto the verandah, and sits down next to Sophie. She talks to her in a steady and supportive way saying, "Oh, what is that sad face there" and Sophie looks up at her making similar 'unhappy' signs, that is, crinkling up her eyes, nose and face, and making half 'whiney' sounds. The educator reaches out and rubs Sophie's back while talking to her about what she might be feeling; brings attention to what the other children nearby are doing and says "See what's this that Timmy's got, oh it's shells"; and reaches for a shell and offers it to Sophie. Sophie reaches for the shell and half smiles, bringing it to her mouth and ends up sitting on her own, engaged with the shells and other children for some time.

It seems that Sophie used her *sayings* with intent and purpose again, met this time by different practices of a second permanent educator who used similar mind-mindedness *sayings* to those described in the previous section. However, the second permanent educator used both physical and verbal *sayings* and ways of *relating* without relying solely on her physicality to 'help' Sophie feel better. Salamon and Harrison (2015) reflect on the prevalence in some educators' *relatings* as primarily involving physical proximity, and how some educators are quicker to respond to babies' emotional expressions by bringing the baby close to them. The examples above highlight how these practices facilitated different possibilities for Sophie's subsequent practices. In the second example, Sophie's subsequent practices included engaging in social *doings* and *relatings* with other children and the pedagogical spaces of the environment.

The next observation depicts Sophie engaged with peers during morning drop off time. When left to manage a social, and emotional, situation primarily on her own, Sophie seemed to have the chance to regulate her own emotions, and the opportunity to develop resilience was afforded her. An educator was talking to a parent and welcoming another child for the day. Because of the circumstances, Sophie received no immediate support from the educator:

> Three babies (Timmy 9.5-months old, Ellen 12-months old, and Sophie, [now] 11months old) are sitting together in a space during morning drop off time. Timmy tries to catch the edge of the lid of a container Sophie is holding, but Sophie pulls it away and plays with it for a few moments. Timmy then takes the lid from her hand. Sophie holds on tight for a moment but Timmy pulls it out of her hand and her expression changes. Sophie lifts her head, looks at me and then looks toward the educator who is talking to a parent. She brings her eyebrows together and vocalises softly, partly whining and partly crying out, then looks back at me. Timmy and Ellen look at her, and she looks at Timmy and continues to half whine. Ellen looks at Timmy who has the container in his other hand, smiles, then back at

> Sophie and reaches out and touches Sophie on the chest while she vocalises assertively. Sophie screws up her face quickly, which begins to go red, looks down and makes crying sounds again though somewhat more intensely than before. Sophie's vocalisations are brief but she still has her face screwed up and is looking at me now…. Ellen touches her face. Sophie screws up her eyes, nose and face, opens her mouth wide and makes measured crying-like vocalisations for a few moments, first looking at the educator and then at me as she does. She stops, then makes a few loud but less intense sounds. The educator has been talking to the parent dropping off their child, but is watching. Sophie continues to make her 'unhappy' sounds on and off, kicking her legs out and looking between the educator and in front of her….Ellen engages vocally with the educator who gets down on the floor, and Sophie looks down and begins to screw up her face and softly make her 'unhappy' sounds then looks back up and directly at the educator. The educator changes her expression from bright and smiling and looks at Sophie and says in a sympathetic voice: "What's wrong with Sophie?" Sophie continues to look at her with chin down and holding the little bowl in her hands, her face slightly screwed up but watching as another child engages with the educator. As the educator asks the other children how they are, Sophie continues to feel the bowl in her hand and her face becomes neutral while she watches the interaction. She looks at another child playing in a different play space, and touches the bowl to the floor as her hand moves downward. It makes a noise, and she repeats the action a number of times then crawls toward the other child seemingly happy again.

In this particular situation, the educator was engaged with a parent but had been keeping an eye on the interaction between the babies. Her practices of watching and waiting suggest that, like Nella whose practices as an educator were described in the previous section, she believed in the capabilities of the babies. Within the practice architectures those practices established, these babies shared many opportunities that enabled particular practices of their own. The babies' *sayings* included smiling, watching intently, gesturing, and exhibiting very clear expressions of discontent. Their *doings* included learning to negotiate shared resources, seeking assistance through vocalisations to adults, and self-regulating their emotional experiences. Finally, the babies' *relatings* included interacting with peers for a more extended period, and experiencing the dynamics of the developing peer relationships. In particular, Sophie experienced *relatings* that involved almost no physical proximity with an educator and she was ultimately left to rely on herself.

The data segments pertaining to Sophie highlight the practices of a baby, shaped by, and shaping, practice architectures created by the practices of different educators (and babies[6]). In the first transcript, Sophie's focus educator believed Sophie was reliant on an adult (i.e., the focus educator) to manage what appeared to her to be an emotional expression. However, Sophie's *sayings* seemed to be more communicative than merely emotional, and contrary to the educator's assumptions, Sophie appeared to be actively using her crying type behaviours as a form of 'emotional capital',[7] i.e., Sophie seemed to be 'cashing in' on the dynamic that she

[6] The practices of the other babies were also significant in shaping (and being shaped by) Sophie's practices. However, discussing the impact of other babies' practices is beyond the scope of this chapter.

[7] Based on Bourdieu's notion of capital as a crucial source of power (Bourdieu 1986), I conceived of 'emotional capital' as a baby's ultimate source of power. Since babies are born able to cry *and* since adults are genetically engineered for babies' cries to evoke a response, it seemed clear that,

had created with her focus educator, grounded in conceptions of the attachment relationship between focus educator and infant. The result for Sophie was to end up sitting in the educator's lap for an extended period of time with limited engagement with pedagogical spaces and other children around her. In the second situation, when Sophie used the same 'currency' with another educator, i.e., cries and whines of different intensity, the educator's practices shaped different outcomes for Sophie, and she ended up engaged with other children and resources. In the final encounter, Sophie needed to regulate her own emotional experience. The difference in the way the educators responded to the same crying-type behaviours (grounded in beliefs of infants as more and less capable of regulating their emotional experience), is significant because of the different possibilities for Sophie's learning about social understanding and emotional resilience that were enabled and constrained.

Sophie's story represents one baby's active use of evocative emotional communication. However, during my time at the setting, I observed other children consistently engaging in similar agentic communicative behaviours. An important implication of infants' drawing on 'emotional capital' in this way is that it challenges the pervasive image of infants as predominantly emotionally vulnerable and dependent on adults, and, offers a line of critique of taken-for-granted use or valuing of attachment theory in infant pedagogy (Cortazar and Herreros 2010; Degotardi and Pearson 2009; Page and Elfer 2013). Further, an implication for EC educators includes the need to be aware of infants' powerful role in co-directing the course of relationships and dynamics they develop with others, and in the co-creation of practices and practices architectures. Finally, illustrating how educators' conceptions influence their practice in ways that enable and constrain infants' own practices, and ultimately their opportunities for learning, has implications for incorporating critically reflective practices into the many facets of daily infant pedagogy. As one participant commented in a group discussion, "If we don't question our practice we end up possibly restricting what these children do".

Interdependency of Babies' and Educators' Practices in ECE

Examination of the practices of early childhood educators and infants in a particular early childhood setting highlighted the interdependent nature of educators and infants practices. Babies' practices shape, and are shaped by, the practices of EC

given the nature of infants learning what they repeatedly live, and acting intentionally with that learning, babies might quickly perfect their emotional communication in sophisticated and agentic ways. Andrew (2015) uses the notion of emotional capital to refer to a "repertoire of emotional resources" (p. 1) that EC educators draw on in their practice, which become embodied in time. Following Bourdieu's notions of symbolic economies, he considers that this set of emotional skills form a vital part of EC educators' practices. Andrew's (2015) research focuses solely on educators' emotional practices. However, his notion of emotional capital sits well with my observations of the infants' practices and their use of an emotionally evocative repertoire of skills.

Fig. 5.1 Interdependent nature of educators' and infants' practices. Adapted from a diagram of practices of leading in Kemmis et al. (2014, p. 165). Copyright 2014 by Springer Science + Business Media Singapore. Adapted with permission

educators, which are shaped by, and shape, the arrangements of early childhood education. This complex relationship is illustrated in Fig. 5.1.

Educators' practices emerged from particular ways the educators thought about infants, and conceived of infants as more and less capable. Educators who believed infants to be capable of social and emotional independence appeared to give the babies more 'space'. Their *sayings* included 'mind-mindedness' talk and were confident, supportive, and often reinforced with physical *doings* that seemed to equally 'speak' to infants' non-verbal communication styles, such as a rub on the back while finding a new resource to talk about. Those educators who believed infants to be less capable of social and emotional independence seemed to use their physicality more to support, and at times interfere with, infants. Their *sayings* seemed to have fewer psychological ascriptions or extended explanations, and rather than reinforcing *sayings* with physicality, their physical *doings* were a primary mode of engaging with the babies. In many ways the *relatings* of these educators were realised through their physical power to either pick up or stop a child.

Educator practices linked to these different conceptions constrained and enabled the practices of the babies, and thus their opportunities for learning. For example, infants' *doings* such as reaching for peers, touching them, and negotiating shared objects, and *relatings* such as hugging and kissing their peers, and negotiating the dynamics of social interactions, were found to be enabled by space afforded by educators whose practice was underpinned by a belief of infants as socially capable.

That these practices work toward developing dispositions in infants that impact their social and emotional outlook and attitudes, suggest much is at stake when these opportunities for learning are constrained.

Concluding Thoughts

By exploring babies' lived experiences as practices and the relationship between the babies' and educators' practices in a particular ECE setting, I have highlighted the interdependent nature of the infants' and educators' practices, showing how the practices of the educators were practice architectures for babies' practices and vice versa. In direct and indirect ways, EC educators establish spaces within which infants experience early childhood education. Reframing infants' lived experiences as practices enabled a view into the complex nexus of arrangements that shaped, and were shaped by, both the educators' and infants' practices,

Through empirical examples, I have also shown that babies *are* capable of managing social and emotional experiences independently. Babies like Sophie expressed agency through their practices, shaping the practices of the educators. Babies' agentic practices consisted of, among other things, calling out to educators with emotionally evocative *sayings* that included facial expressions and unhappy gestures, and crying type sounds of different intensities. The sophisticated nature of this agentic communication, seen as a form of 'emotional capital', offers important insights into the complex nature of infant pedagogy and advances our understanding of infants' social agency and their capacity to interact in meaningful ways that mutually share "attention and intention" (Degotardi 2011, p. 32). Importantly, the analysis also highlighted that, because educators' conceptions of babies' capabilities influence the *sayings*, *doings*, and *relatings* of ECE educators, erroneous conceptions about babies' capabilities are potentially limiting in terms of what and how babies learn.

Babies learn what they live through repetitive action and interaction with the people and places in their world. As Kemmis et al. (2014) argue, "what a learner learns is *dispositions* that include 'knowledge', 'skills' and 'values'" (p. 60). What infants might learn and what dispositions might emerge within the arrangements of more and less space to independently manage social and emotional learning situations, is at the heart of the findings presented in this chapter. However, educators must critically reflect on the ways their own relating and attachment styles influence their practices (Salamon and Harrison 2015) and so set up arrangements that enable and constrain infants' learning. This is especially important given the complex and emotional nature of infant pedagogy (Elfer 2012; Page 2014; Taggart 2011) and the delicate balance between dependence and independence between infants and educators (Page and Elfer 2013) that can further influence practice. Knowing infants will always learn, and act intentionally with what they have learned, promoting the creation of practice architectures that enable social and emotional competence and resilience seems most beneficial to infants' overall wellbeing and development.

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Chapter 6
Mentoring as Part of a Trellis of Practices that Support Learning

Susanne Francisco

Abstract In a number of countries, including Australia, vocational education and training (VET) teachers often begin teaching without teaching qualifications or prior experience related to teaching. In such circumstances, mentoring is commonly identified as an appropriate strategy to support teacher learning. However, access to mentoring for new teachers can be complex. Further, even when mentoring is available, it does not always provide strong support for teacher learning.

Drawing on evidence from a 2-year longitudinal study of the learning of novice VET teachers, and using the theory of practice architectures, this chapter addresses two key areas related to teacher learning through mentoring: access to mentoring; and mentoring as it inter-relates with other 'practices that support learning' (PSLs). The chapter explores the practice architectures that enabled and constrained teacher access to both formal and informal mentoring. Additionally, the chapter uses the theory of ecologies of practices in a modified way to explore the practices that support learning in four of the case studies from the broader study. It does this by looking at the inter-relationships between mentoring and other PSLs. In two of these cases, inter-related PSLs that worked together to strongly support teacher learning are identified, and the concept of a trellis of PSLs is outlined.

Governments, industry, the community, and individuals have increasingly high expectations of the Vocational Education and Training (VET) sector in Australia as well as in other countries (Elliott 2013; Harris et al. 2009; Wheelahan and Curtin 2010). To meet these expectations, VET teachers require well developed skills and abilities. In a number of countries, including Australia, VET teachers often begin teaching with little or no experience in teaching and with no education related to learning how to teach. For some of these teachers, initial experiences of teaching can be daunting. Mentoring is one approach that has been used to support the learning of new teachers. It has been used in many countries and across a broad spectrum

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of teaching contexts (see for instance Fox et al. 2010; Guthrie 2010; Kemmis et al. 2014a; Pennanen et al. 2015).

This chapter builds on and contributes to work in mentoring to support novice teacher learning. Although mentoring has been identified as relevant to the support of VET teachers (Guthrie 2010; Wheelahan and Moodie 2011), little analytic attention has been paid to the site-based arrangements that impact on VET teacher access to mentoring. Firstly, I address this issue by using the theory of practice architectures (Kemmis et al. 2014b) to analyse what enables and constrains novice teacher access to mentoring in particular sites. Specifically, I highlight the cultural-discursive, material-economic, and social-political arrangements that enabled and constrained novice teacher access to mentoring in the empirical study that forms the basis for this chapter. Secondly, I use the theory of ecologies of practices (Kemmis et al. 2012) in a modified way to focus specifically on the relationships between mentoring and other practices that support learning (PSLs). Studies in mentoring to date have largely examined mentoring as a standalone practice, and there has been little attention paid to how mentoring interacts with other practices to support the learning of novice VET teachers. This analytic focus on mentoring as part of an ecology of practices enables a further contribution to the mentoring literature and provides the groundwork for the introduction of the concept of a trellis of practices that support learning.

In this chapter I identify practices that support learning as those practices that engage novice teachers in activities whereby they come to learn "how to go on" (Wittgenstein 2009, p. 66) as teachers. Kemmis et al. (2014b) break down understandings of learning how to go on as involving "learning how to go on in (a) language games, (b) activities, (c) ways of relating to others and other things in the world, and (d) how these things hang together in the common project and practice of coming to know how to go on in a practice" (p. 78). Here I focus on those practices (for instance mentoring and team teaching) that are not learning practices themselves, but that are practices that support learning.

The chapter begins with a brief introduction to the Australian VET teaching context, the teacher mentoring literature, and to the study that is discussed in this chapter. I then outline findings of the study that pertain to mentoring, and highlight the practice architectures that enabled and constrained novice teacher access to mentoring. Next, focussing on four cases from the study, mentoring is explored as a component of an ecology of practices that support learning, and the concept of a *trellis* of PSLs is introduced. This includes an analysis of the practice architectures that enabled and constrained the development of a trellis of PSLs in the study. Finally, I raise two inter-related issues associated with the use of mentoring as a strategy to support teacher learning: teacher workload and teacher volunteerism.

The Australian VET Teaching Context

In Australia, more than two thirds of all VET is undertaken through colleges of Technical and Further Education (TAFE) or other public providers (National Council for Vocational Education Research 2012). TAFE colleges are the main public provider of VET in Australia. Casualisation of the TAFE teacher workforce has been increasing since the early 1990s (Nechvoglod et al. 2010). While the proportion varies across Australia, the percentage of TAFE teachers employed casually is more than 50 % nationally, and much higher than this in some states (Nechvoglod et al. 2010; Simons et al. 2009). This casualisation of the TAFE teacher workforce is occurring against a background of workforce change, demographic change, and an increasingly globalised economy (Guthrie et al. 2006; Wheelahan 2010; Wheelahan and Moodie 2011).

Regardless of the basis of employment, the expectations of, and demands on, VET teachers can be high. Wheelahan and Curtin (2010) note that "there is widespread recognition that achievement of government objectives for the growth of VET, increasing the workforce's skills, social inclusion, and specific participation and equity targets require highly skilled VET teachers" (p. 62). VET teachers work with diverse student groups with a wide range of needs and abilities. They also teach across a range of environments including online and classroom-based environments, and in the workplace. High-level skills are required, and a majority of VET teachers begin teaching as casual employees (Simons et al. 2009). Further, in many cases, teachers begin to teach with no formal education or other preparation related to how to teach (Wheelahan and Moodie 2011). Work-based learning then necessarily becomes an important aspect of teacher development. Guthrie notes in relation to the whole VET sector, "whatever the level of casualisation, a key issue is that they generally have less access both to ongoing support from other VET staff and to professional development opportunities" (2010, p.10). The present high level of casualisation needs to be taken into account when considering teacher professional development strategies, including mentoring.

VET Teacher Mentoring

The literature on the mentoring of teachers is extensive (Cunningham 2011; Fletcher 2012; Francisco and Darwin 2007; Hankey 2004; Ingersoll and Strong 2011). What mentoring of teachers involves is contested (Kemmis et al. 2014a), and a range of mentoring approaches are used (Lane 2004). There has been little research reported in relation to mentoring of novice VET teachers in Australia. Where mentoring is discussed, it is often focussed on suggesting that mentoring be used to support teacher learning (see for instance Guthrie et al. 2011) rather than reporting on mentoring research.

Both formal and informal mentoring by experienced teachers were evident in the study that is discussed in this chapter. The mentoring that I focus on in this chapter is induction mentoring: i.e., mentoring to support novice teachers in developing their skills to undertake their role as a teacher. I define mentoring as a relationship where an experienced teacher (a mentor) supports the learning of a less experienced teacher (the mentee) over a period of time.

The Study

The research findings reported here are part of a broader qualitative, longitudinal study that used a case study approach to explore the learning of novice VET teachers. The study, undertaken over 2 years, took place across four urban TAFE campuses. All novice teachers who began teaching in each of the campuses in the first year of the research were invited to participate. All nine eligible teachers, from eight teaching departments, agreed to do so. Novice teachers were defined as those teachers who had had no previous education related to being a teacher, and who had not previously taught classes of students. Each of the eight teaching departments was unique and operated differently in many ways.

Case studies of the learning of each of the teachers were developed based on semi-structured interviews with novice teachers at certain intervals: within the first 6 months, after 1 year, and after 2 years of teaching. Field notes taken around the time of each interview were also important data sources. Other data sources included teacher-produced resources, teacher journal entries, teacher emails in response to open-ended questions about their learning, and publicly available documents produced by the TAFE college, or informing the operation of the TAFE college.

Teacher Access to Mentoring

The theory of practice architectures sees practices as prefigured in a site by cultural-discursive, material-economic, and social-political arrangements (Kemmis et al. 2014b). These arrangements enable and constrain the actions – the sayings, doings, and relatings – that take place in the site (Kemmis et al. 2014b). A more detailed discussion of the theory of practice architectures can be found in Chapter 1 (this volume). This section presents an overview of the formal and informal induction mentoring that was available for novice VET teachers in this study, and the practice architectures that enabled and constrained novice teacher access to induction mentoring.

Formal Mentoring Program

A formal mentoring program was offered by the organisation where this research was undertaken. This program supported two types of mentoring: induction mentoring and developmental mentoring, and was based on Zachary's (2011) understanding of mentoring as using adult learning principles. Induction mentoring is initial support for learning a new job. Developmental mentoring is mentoring of more experienced teachers, usually in one or more specific areas such as developing online teaching skills, or better supporting student learning. Most mentoring undertaken through the formal mentoring program fitted within the developmental mentoring category. In this section, I address the practice architectures that enabled and constrained novice teacher access to formal induction mentoring.

The formal mentoring program had been established for some years prior to the employment of the teachers who were participants in this study. The training of mentors formed part of the practice architectures that enabled formal mentoring. Other arrangements that supported formal mentoring included a mentor coordinator, a handbook for mentors, and a staff award for excellence in mentoring. This training and the handbook identified the learning goals of the mentee as the focus of the mentoring relationship, and served to establish this understanding as part of the cultural-discursive and social-political arrangements of mentoring in the organisation.

Despite the existence of the formal mentoring program, only two of the nine novice teachers in this study were in a formal induction mentoring relationship. The initial constraint on teacher learning through formal mentoring was novice teachers not being aware that a mentoring program existed. While, theoretically, formal mentoring was available to all teachers, in reality, many of the novice teachers did not know that formal mentoring was an option to support their learning. The program was advertised through the internal staff information system, as well as occasionally being mentioned in weekly emails that were sent to all staff. Administrative procedures that resulted in casual teachers not having access to a staff email or to the staff information system often for up to the first 10 weeks or more of employment was an important material-economic arrangement that constrained novice teachers accessing this information. Operating without staff email or other organisation-wide information services for so long, teachers often did not see a need to regularly access them once they did become available.

The two teachers who did access formal mentoring were provided with a formal mentor by their supervisors when they commenced teaching. In both cases, mentoring was included in the workload of the experienced teachers involved, and they received release time from teaching to mentor novice teachers. Teaching release time for mentoring was not a usual component of the mentoring program. Interestingly, in the departments where release time was not provided for experienced teachers to mentor novice teachers, although it was theoretically available, no formal induction mentoring was provided. This is consistent with findings by

Hankey (2004), who identified the importance of mentoring being explicitly embedded in teachers' workload.

In one site, the cultural-discursive arrangements that enabled novice teacher access to induction mentoring included the embedding of mentoring as an expectation across the faculty through approaches such as discussions about mentoring at staff meetings. Material-economic arrangements that enabled access to mentoring included written documentation that outlined clear roles and expectations of mentors, underpinned by mentors having mentoring as an acknowledged component of their role and being provided with release hours to undertake the mentoring role.

From a social-political perspective, for the novice teachers, the mentors were strangers who were made available by the organisation to support their learning. There was a clear framework for their relationship, and the novice teachers were aware that the mentors were being released from teaching hours so that they could provide support through mentoring. This established the mentoring as something to which the novice teachers were entitled, rather than a favour the experienced teacher was doing for them.

In summary, while there was a well-established formal mentoring program available, only two of the nine novice teachers in this study accessed this formal mentoring. In addition to the existence of the organisation-wide mentoring program, two important material-economic arrangements that enabled teacher access to formal induction mentoring were the provision of release hours from teaching for the mentors and the setting up of the relationships by each mentee's supervisor.

Informal Mentoring

For the purposes of analysis, an informal mentoring relationship, as with formal mentoring, is one where the informal mentor deliberately seeks to support the learning of the novice teacher (mentee) and regularly meets with the mentee for that purpose. Informal mentors do not have mentoring as part of their job description and they are not undertaking the mentoring as part of a formal mentoring program. While only two novice teachers accessed formal induction mentoring, informal induction mentoring was accessed by five of the teachers in the study. Three teachers were informally mentored for between 6 weeks and 6 months at a time, with one teacher informally mentored for the first year of teaching and another informally mentored for the first 18 months of teaching. In some of the sites, teachers were informally mentored by more than one experienced teacher at the same time. It is likely that cultural-discursive arrangements associated with working in an environment where supporting learning is part of a teachers' day to day role, may have influenced the willingness of experienced teachers to informally mentor novice teachers. The desire of experienced teachers for novice teachers to fit in with 'the way we do things around here' and to add to the productivity of the area may also have been influential in experienced teachers' decisions to mentor novice teachers. Other cultural-discursive arrangements supporting experienced teachers'

willingness to informally mentor novice teachers include the fact that a considerable proportion of the staff had been trained as mentors; and the ongoing references to mentoring in discussions at staff meetings and informal gatherings. Official valuing of mentoring through a staff excellence-in-mentoring award also formed part of the cultural-discursive arrangements that enabled informal mentoring.

Team teaching and co-teaching formed part of the practice architectures that increased the likelihood of informal mentoring. Team teaching is when two teachers teach together in the same classroom, while co-teaching is where two or more teachers teach the same subject to different cohorts of students in the same semester, often at the same time. In this study, in each case where team teaching was undertaken, a mentoring relationship developed between the novice teacher and the experienced teacher. The material-economic arrangement of team teaching can be seen to have enabled the development of a mentoring relationship. This also occurred in a number of cases where novice teachers were co-teaching with experienced teachers. Novice teacher observation of the experienced teacher teaching, together with mentoring practices including discussion of teaching approaches, and those associated with shared development of resources, was enabled by team teaching and, to a lesser extent, co-teaching.

An interesting social-political phenomenon that became apparent in the study was that novice teachers were less likely to value the pedagogical advice of experienced teachers if they had not recently worked in, and/or were not teaching in, the same industry area as the novice teacher. In at least two sites, the novice teachers did not pursue an informal mentoring relationship when it was tacitly offered, in both cases because the novice teacher did not value the teaching advice of the experienced teacher. In one of these cases, the novice teacher justified not accepting this tacit offer of informal mentoring by arguing that while the experienced teacher had previously worked in the occupation that they were teaching about, she had not worked in the specific section of the industry that the novice teacher worked in and was teaching about, and therefore could not understand what was required to support students to learn how to prepare to work in that part of the industry. In the other case, the novice teacher felt that the industry knowledge of the experienced teacher was outdated. Casual teachers within the first year of their teaching career, and especially those teaching only a few hours a week, were especially likely to make similar assumptions. Conversely, these same teachers were willing to take teaching advice from other relatively inexperienced teachers if they had a similar industry background and were teaching in the same specific area, particularly if they were co-teaching the same subject. Over time, this unwillingness to take advice from experienced teachers with different industry backgrounds decreased in all cases except where the teacher was employed to teach only 3 hours a week. One explanation for this is that the new teachers were dual professionals, working both in teaching and in the industry they were teaching about. They were novices in only one of these and usually very competent in the other. Such teachers can be seen to have more recent expertise in the industry that they are teaching about than the more experienced teachers. It is not surprising, then, that they foreground this expertise in relationships with other teachers.

In this study, the novice teachers who had the least access to mentoring were those employed casually. Turnover of casual teachers was high in this study, with only two of the four casually employed teachers still working in the organisation after 1 year, and only one still working in the organisation after 3 years. To my knowledge, the three casual teachers who left teaching have not returned to it, either at the organisation where the research was undertaken, or elsewhere. Because most mentoring was undertaken voluntarily, it is possible that the high turnover of casual teachers further constrained casual teacher access to mentoring as a result of experienced teachers becoming less willing to mentor an ongoing revolving door of new teachers.

In a number of sites, the people who informally mentored novice teachers were also, in effect, their direct supervisors (although, on paper, the Head of Department was the supervisor of casual teachers). In most teaching departments, an experienced teacher was given the role of coordinator of a qualification (e.g., coordinator of the Certificate III in Business). The role was usually related to student enrolment, course compliance, and associated administrative arrangements. In many cases, the coordinator was the main person with whom the novice teacher interacted. In some cases, this social-political arrangement enabled an informal mentoring relationship to develop.

While mentoring by qualification coordinators did lead to novice teacher learning, there were a number of arrangements that constrained teacher learning as a result of mentoring by coordinators. Perhaps the most prevalent of these were the material-economic arrangements related to the coordinator's workload and consequent availability for mentoring. One of the novice teachers noted:

> …the coordinators have a lot of responsibility put on them, I feel. And I think because those coordinators are so busy, they have a lot of responsibilities with [various tasks], they're just so snowed under. I just don't think that he's got much time to assist me.

The new teacher was aware that mentoring was additional to the coordinator's workload, and that time taken for mentoring reduced time available to complete the other work that the mentor needed to do, or increased her time at work. From a social-political perspective, this impacted on the willingness of the novice teacher to seek more interaction with the coordinator, and thus restricted their access to support with their learning. For those casual novice teachers working less than 6 hours a week, a reluctance to seek advice from the qualification coordinator often resulted in the teachers not being clear about what was required of them, not seeking support to clarify expectations, and making mistakes. The following comment from a casual novice teacher was not unusual:

> I didn't want to bother … feel like I was bothering her over a single thing. Not that she ever made me feel like I was a nuisance or annoying her, cause she's not like that, she's really lovely, but I just thought, felt that I shouldn't have to just rely on her, like contact her every time I wasn't sure about something.

In this instance, the lack of social-political arrangements such as clear guidelines and negotiated expectations characteristic of the formal mentoring program

constrained the casual teacher's access to support and advice from an experienced teacher, and constrained her learning.

The heavy workload of experienced teachers and coordinators (who were also experienced teachers with a heavy teaching workload) impacted on their availability to support novice teachers. This, together with lack of recognition of mentoring as a component of coordinators' workloads, was one of the practice architectures that constrained the availability of informal mentoring for novice teachers. The following comment from another casual teacher was indicative of the experiences of many of the teachers:

> This is also where I probably could do with a bit of guidance or be grateful for some learning. But it's just everyone's struggling for time at the moment.

Hankey (2004) found similar issues in her study of the mentoring of trainee Further Education teachers in England.

In summary, five of the nine teachers in this study were involved in an informal mentoring relationship. Practice architectures that enabled novice teacher access to informal mentoring included some of those that supported access to formal mentoring; for instance, mentoring related discussions at staff meetings, training for mentors, and arrangements where mentoring was valued by colleagues and managers. Working closely with coordinators and team teaching or co-teaching with experienced teachers were other practice architectures that supported the development of relationships that led to informal mentoring. Constraints to accessing informal mentoring included being casually employed, which led to reduced opportunities to develop relationships with experienced teachers, and the heavy workloads of experienced teachers. I now turn to a discussion of mentoring within an ecology of practices that support learning. In doing so, I consider the practice architectures that enabled or constrained the development of mentoring as part of a trellis of interrelated PSLs.

Ecologies of Practices and Developing a Trellis of Practices that Support Learning

The theory of ecologies of practices posits that practices, like biological systems, can form inter-related webs, and that one practice can form the practice architectures for another practice (Kemmis et al. 2014b). The theory addresses the ways in which one practice, such as teaching, is influenced by other practices operating at the site, such as learning and communicating (Kemmis et al. 2012). A brief outline of the theory of ecologies of practices can be found in Chapter 1 of this volume. (For a more extended treatment, see Kemmis et al. 2014b). In this chapter, I use the theory of ecologies of practices in a modified way. Rather than include all inter-related practices, I focus just on different kinds of practices that support learning and shine a light on mentoring as part of an ecology of practices that support learning. I also introduce the concept of a *trellis* of practices that support learning.

Some of the PSLs undertaken by the teachers in this study can be seen to form part of an ecology of practices, where one PSL provides the practice architectures that further enabled the success of another PSL. While being mentored was supportive of teacher learning in this study, it was when mentoring formed part of an ecology of practices that support learning that it was most powerful. It became apparent that the interaction of PSLs in some of the sites formed a trellis of interrelated PSLs. A *trellis* is made up of interconnected components that help support growth in a particular direction. For the purposes of illustration, I now consider the PSLs that were available for four of the novice teachers where mentoring formed a component of those PSLs: Trevor, Sarah, Sam, and Ewan. Trevor and Sarah were the two teachers who had been provided with an induction mentor through the formal mentoring program. Sam and Ewan were two of the five teachers involved in an informal mentoring relationship. I focus specifically on the relationship between mentoring and other PSLs for these four teachers and consider the practice architectures that enabled and constrained these inter-relationships.

Shortly before Trevor was employed, a single teaching department had been divided to create two new departments. These changes impacted on the practice architectures that prefigured the PSLs available for Trevor. For clarity, I refer to Trevor's department as Department A and the other as Department B. In the restructure, many of the physical resources were moved to another campus with Department B. In Trevor's department, resources were relatively limited, and this was an important material-economic factor that impacted on the PSLs that were possible. Also, most of the experienced teachers, administrative staff, technical support staff, and the previous Head of Department moved to the other campus. Department A was left without a Head of Department (HOD) for the 2 years of the study and the Head of Faculty (the Head of Faculty is usually responsible for three to six teaching departments) became the nominal HOD. Also, most remaining permanently-employed teachers in Trevor's teaching area resigned or retired. As a result of these changes, experienced teachers were not available to provide support, to team teach with, or to share updated resources. The lack of administrative and technical support staff meant these possible sources of support and advice were also not readily available. The lack of a HOD resulted in arrangements where there was no-one to argue for resources in the meetings that were able to be attended by Heads of Department only. This hierarchical structure, which resulted in no-one from Department A attending these meetings, constrained access to resources, and consequently access to PSLs such as team teaching.

Trevor's supervisor, the Head of Faculty, arranged for a mentor for Trevor as part of the formal mentoring program. Trevor's mentor was an experienced and highly regarded teacher who had successfully mentored many other teachers. Because the mentor was in another teaching department and worked in another area of the campus, however, interactions between them were confined to regular, scheduled discussions, in which the mentor sometimes gave Trevor advice about others who could assist him in particular areas. Trevor engaged in a range of practices for the purposes of learning to teach and to undertake the teaching role, including reading and observing other teachers teaching. However, there was little or no connection

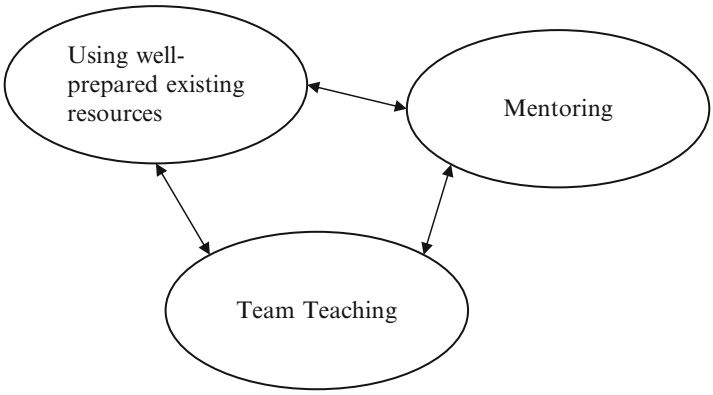

Fig. 6.1 Inter-related practices that support learning: Sarah

between these PSLs and the mentoring that he was involved with. For Trevor, mentoring was a standalone PSL which seemed to him to be unrelated to the other PSLs in which he engaged. Relative to others in this study, Trevor's learning was stressful and involved making mistakes, some of which added considerably to his workload. Trevor worked long hours just to manage, reporting that he regularly worked into the early hours of the morning to be prepared for teaching the next day.

Sarah's teaching department had a tradition of providing novice teachers with a mentor as part of the formal mentoring program. For Sarah, team teaching with her mentor, together with using well-prepared teaching and assessment resources that were made available by her mentor, provided support for her learning of the specific practices she undertook. This is represented in Fig. 6.1. The arrows in this figure represent the interactions between mentoring, the use of well-developed resources, and team teaching. In team teaching with Sarah, her mentor shared her resources, which became an important basis of their teaching. These resources further enhanced Sarah's teaching, and were also a factor in the ongoing mentoring and team teaching arrangements. Sarah undertook a range of other PSLs, such as studying for two different qualifications, and reading, but these were not clearly connected with the three PSLs that I have highlighted. While Sarah valued her mentor and felt supported by her, in Sarah's case, mentoring was part of a relatively unpopulated ecology of inter-related practices that supported her learning.

Some of the practice architectures of the teaching department where Sarah was employed served to constrain her learning. Firstly, Sarah was employed on a casual basis. This gave her limited access to a range of material-economic arrangements such as staff emails and other sources of information. Most importantly, this department had a separate staffroom for casual teachers which was located in another building across the campus from the offices of the experienced teachers. Sarah did not know the experienced teachers in the department, and when her mentor was away, she effectively had little access to support or advice. The network of PSLs inter-related with mentoring was thus limited. The following year, when Sarah was

teaching in another department, she felt that she was still very new as a teacher. Relative to the experiences of the novice teachers discussed next, the PSLs available for Sarah provided only limited support for her learning.

In the site where Sam was employed as a teacher on an ongoing contract, the practice architectures largely served to support his learning, and many of the PSLs he engaged in were inter-related. The Head of Department was experienced, and was able to access resources to enable team teaching and some teacher release for resource development. For Sam, team teaching was undertaken with the qualification coordinator. This coordinator also became his informal mentor. In the staff room, Sam was placed in a work environment where he and his mentor were co-located with desks beside each other. This is illustrated in Fig. 6.2 below. The two small circles represent the chairs of Sam and his mentor. The large oval represents a table that was used by Sam and his mentor, often working together. Other teachers collaborating with Sam and his mentor also used the table occasionally to develop resources, or for meetings. This material-economic arrangement provided easy access for Sam to ad hoc advice and assistance. Sam's mentor arranged for him to co-teach some subjects with other experienced teachers, and Sam had easy access to experienced teachers in the staff room. Sam's teaching department was well-established, with little casualisation and little staff turnover. In the cultural-discursive and social-political dimensions, there was an expectation that new teachers would be supported and retained. In this department, perhaps influenced by the relatively low level of staff turnover, teacher solidarity was strong, and the additional work that experienced teachers did to support new teachers in a sense became an investment in the development of their department. Figure 6.3 shows that for Sam, mentoring was interwoven with a range of other PSLs. This combination of PSLs can be seen to have provided good support to enable Sam's learning.

Ewan's department was well-resourced in comparison with other departments in this study. They had an experienced HOD who was able to access funding for a range of resources. The material-economic arrangements associated with this higher level of resourcing included adequate administrative and technical support staff, who took some of the non-teaching workload that in other departments was undertaken by teachers. This enabled time for Ewan to focus on learning to be a

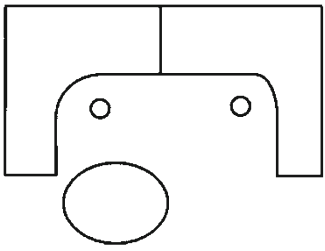

Fig. 6.2 Sam's workstation

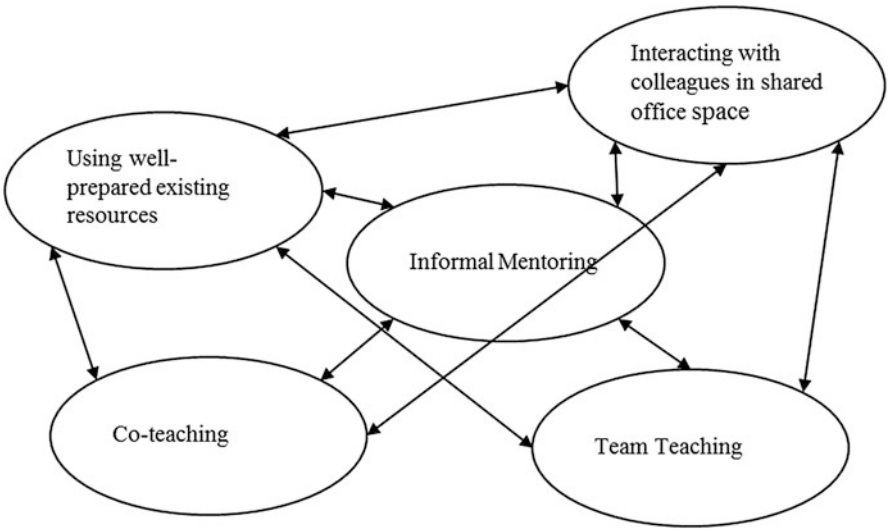

Fig. 6.3 Inter-related practices that support learning: Sam

teacher. Departmental resources also enabled the use of the higher-cost team teaching. Other material-economic arrangements that enabled Ewan's learning included co-location with other experienced teachers in an open plan staffroom which facilitated ad hoc discussions and advice.

Like Sam, Ewan was informally mentored by the qualification coordinator of the course he was teaching. Ewan's mentor provided him with well-developed lesson plans, assessment tasks, and other resources. Ewan and his mentor also team taught a number of subjects together. The mentor also arranged for Ewan to team teach with an experienced teacher the first time that he taught any subject that he was uncertain about, and to co-teach with other experienced teachers in subjects where he had more confidence. In Ewan's teaching department, more than two thirds of the experienced teachers, including Ewan's mentor and the HOD, had a Bachelor of Adult Education, or a Graduate Certificate in Adult Education. This created cultural-discursive arrangements that included a broadly-held understanding of adult learning principles, and learning matters were discussed regularly.

In the social-political dimension, Ewan's department experienced a sense of solidarity among teachers. All staff met every day around a large communal table at morning tea (smoko) where discussions included both personal and professional topics, and Ewan was able to ask questions and hear stories in a relaxed social environment. The daily smoko was evidence of, and served to further develop, this solidarity. Smoko became another part of the trellis of practices that supported Ewan's learning.

After teaching for 6 months, Ewan was involved in all of the practices of the department, initially together with his mentor, or another experienced teacher. This included the collaborative development of teaching and assessment practices and

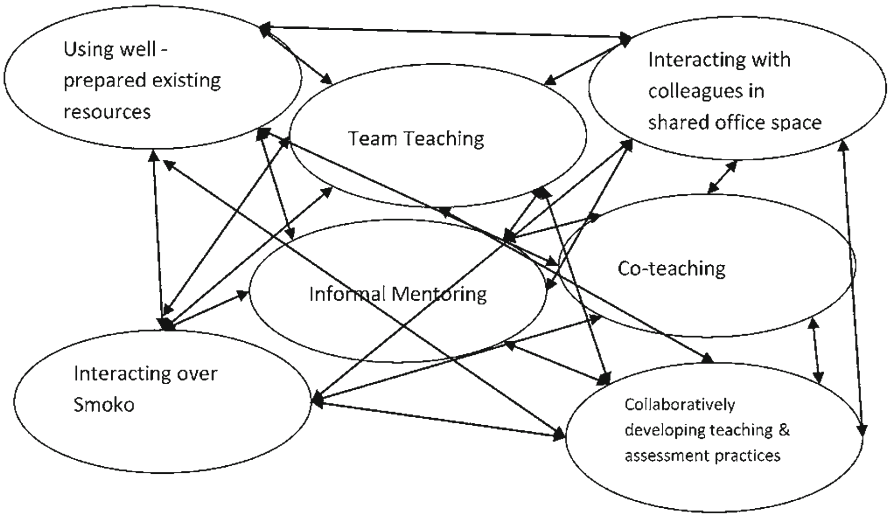

Fig. 6.4 Inter-related practices that support learning: Ewan

resources. More than any of the other teachers in this study, Ewan quickly became a confident and capable teacher. Figure 6.4 shows that for Ewan, mentoring was just one of the inter-related practices that supported his learning.

Examples of the interactions between each of these PSLs are made more explicit in Table 6.1 below. The PSLs that are outlined in Fig. 6.4 and Table 6.1 are not the only PSLs that Ewan engaged in for the purposes of learning to be a teacher. For instance, he also read relevant manuals at home; he discussed teaching with, and received advice from, his family; and he attended training sessions related to teaching. Similarly, Sarah and Sam engaged in PSLs that did not inter-relate with the PSLs outlined in Figs. 6.1 and 6.3 respectively. Importantly, when PSLs inter-related so that they formed a trellis of PSLs – such as that shown in Fig. 6.4 – they provided a powerful support for teacher learning.

Ewan's experiences, particularly considered in relation to those of Trevor and Sarah, highlight the importance of the trellis of PSLs in supporting his development as a teacher. While Trevor had a mentor who was recognised as well-trained and experienced, his learning associated with being mentored was not integrated with other PSLs. Trevor's learning was hampered as a result. Sarah's experience of mentoring was integrated with two other PSLs. However, when she went to a new teaching area in her second year of teaching, she found that it had not actually given her a solid basis for undertaking the teaching role, and in many ways she remained a novice teacher. Sam's experience of mentoring was more integrated with a trellis of PSLs and his learning was well supported. Ewan's experience of mentoring as part of a strong, supportive trellis of PSLs resulted in him learning to undertake the role of a teacher very quickly and well.

While the informal mentoring examples used in this chapter were part of a trellis of PSLs, and the formal mentoring examples were not, no part of this chapter should

Table 6.1 Examples of inter-relationships between practices that support learning

	Smoko	Resources	Team teaching	Co-teaching	Office interaction	Collaborative development of teaching and learning practices
Mentoring	Introduced to others by mentor. Some incidental mentoring happening at smoko.	Mentor shared own resources. Feedback on mentees resources.	Provided experiences that inform the mentoring.	Mentor set this up.	Some mentoring happened here. Mentor facilitated some interactions with others.	Part of the mentoring role included this. Mentor supported and sometimes facilitated this with others.
Smoko		Sometimes talked about resources at smoko. Discussions at smoko lead to sharing of resources.	Discussion of shared experiences while team teaching.	Place of interaction for co-teachers.	Taking more serious discussions from smoko into office interactions.	Solidarity developed at smoko facilitated this.
Resources			Shared resources used in same class.	Sometimes shared resources used.	Discussion of good resources, or of problems with poor resources.	Often need for development identified at smoko, in team teaching, office interactions. Facilitated by mentor.
Team teaching				Sometimes identify co-teacher as someone to team teach with.	Identify people he'd like to learn from through team teaching.	Often need for development of practices identified and facilitated through team teaching.
Co-teaching					Sharing experiences of teaching the same subject. Environment facilitates working together	All teaching the same thing, so work together for ongoing improvement of practices.
Office interaction						Office interaction facilitated collaborative development.

Note. This table outlines the inter-relationships between certain PSLs that Ewan engaged in. The inter-relationships were more extensive than outlined in this table; here I have provided the examples that were most frequent and apparent

be seen as an argument against formal mentoring programs. Rather, the key point is that mentoring, whether informal or as part of a formal mentoring program, is likely to be more effective in supporting teacher learning when it is part of a trellis of PSLs.

Volunteerism and Mentor Workload

Two factors that impacted on teacher access to mentoring were experienced teacher workload and expectations that mentoring was to be undertaken voluntarily by mentees and informal mentors without recompense. For the two cases of formal mentoring in this study, the mentors received some time release from teaching commitments for their mentoring work even though this was not the usual case for those mentoring as part of the formal mentoring program. The formal mentoring program assumed that mentoring would be undertaken by mentors and mentees on a voluntary basis, in addition to other work. For the informal mentors in this study, mentoring was undertaken voluntarily and was not a recognised component of their workload. Thus, the time and effort that informal mentors devoted to mentoring was in addition to their other work. The novice teachers, the students, and the TAFE organisation benefited from this volunteerism. However, the notion that quality VET education is predicated on the goodwill and voluntary work of experienced teachers is a concerning one.

The informal mentoring of novice teachers undertaken by the experienced teachers in this study was in addition to an already heavy workload. Harris et al. (2005) raised this issue of the heavy workload of experienced teachers impacting on the learning of new teachers more than a decade ago when they noted that there was

> extra pressure on existing staff to assist, train and mentor new staff … Experienced staff are obliged to spend considerable time explaining new delivery systems and accountability requirements. Additional tasks such as these create significant amounts of 'incidental' work for the shrinking core of permanent staff. (p. 66)

Since the publication of this work by Harris et al. (2005), the level of casualisation has risen rather than declined (Productivity Commission 2011). The pressure on the decreased number of remaining experienced staff is likely to have increased during that time. This is likely to have an impact on the willingness of experienced teachers to mentor novice teachers, as well as their capacity to do so within a normal work week.

The novice teachers in the study on which this chapter is based were aware of the heavy workload of their experienced colleagues, and as a result, some novice teachers did not seek support from mentors, or potential mentors, when they would have benefited from doing so. For some new teachers the tacit or overt offer of mentoring was not available at all as a result of the heavy workload of the experienced teachers. As one of the teachers noted, "I just don't think he's got much time to assist me" and another noted "everyone's struggling for time at the moment".

In the two cases in which novice teachers were supported in their learning by a strong trellis of PSLs, mentoring was a key component of the trellis. In both these cases, the teaching departments had relatively low levels of casualisation and low staff turnover. Volunteering to support the learning of new teachers becomes more sustainable in such circumstances. However, we know that in most VET organisations in Australia today, high levels of casualisation are the norm (Nechvoglod et al. 2010). It is not sustainable, however, for organisations to expect experienced teachers to voluntarily mentor novice teachers on a continuing basis. Further research into the relationship between levels of teacher casualisation and novice teacher access to mentoring, as well as the relationship between casualisation and the creation of a trellis of inter-related PSLs, would be valuable.

Conclusion

The theory of practice architectures has served as a valuable conceptual and analytical resource that enabled the exploration of the mentoring of novice VET teachers. In this exploration it has become apparent that even within an organisation with an established mentoring program, providing access to mentoring for novice VET teachers is complex. This chapter has shown that access to mentoring does not just happen, but that particular cultural-discursive, material-economic, and social-political arrangements at each site serve to enable or constrain this access for novice teachers.

The chapter briefly addressed two of the arrangements that impact on teacher mentoring: heavy workloads of experienced teachers, and expectations of volunteerism in teacher mentoring. Significantly, the only formal induction mentoring that was available to the novice teachers in this study occurred where experienced teachers were given time release to mentor others. Further, this was made available in sites where access to other practices that support learning was limited for these novice teachers. Practice architectures that constrained the availability of mentoring for novice teachers included an implicit expectation of volunteerism by the TAFE organisation.

Most notably, the chapter has presented the concept of a *trellis* of practices that support learning. It has done this using the theory of ecologies of practices in a modified way to focus on the inter-relationships between practices that support learning in four of the case sites where novice teachers were learning to become teachers. In doing so, it has identified the relationships between mentoring and other PSLs in some of the sites. Further, on the evidence of the more or less rapid development of these novice teachers as teachers, it has argued that richer inter-relationships between mentoring and other PSLs appear to have an impact on teacher learning. In two of these sites, teachers were well supported in their learning because the mentoring they experienced was part of a trellis of inter-related PSLs. These teachers seemed to learn to undertake the teaching role more quickly and effectively than the other two, despite mentoring being made available to all four teachers. The chapter

has outlined the components of a strong trellis of PSLs in these two sites, and identified the lack of development of such a trellis in other sites. Importantly, it has highlighted the value of mentoring forming part of a trellis of inter-related PSLs rather than as a standalone PSL.

If VET teachers are to meet the ongoing and increasing needs of learners, governments, business, and the community, they will need to be well supported in their learning. Ad hoc approaches to VET teacher learning in the workplace are no longer enough. A transformation of how VET teachers are supported in learning to become teachers needs to take place. Mentoring, as part of a trellis of practices that support learning, is likely to be a valuable resource in enabling that transformation.

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Chapter 7
Using the Theory of Practice Architectures to Explore VET in Schools Teachers' Pedagogy

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Abstract The focus in this chapter is on the teaching practices of novice Vocational Education and Training (VET) teachers in Australian schools. An Australian case illuminates the local practice architectures that shape teachers' vocation and their ways of working, the ways practice architectures constrain and enable their practice, and the ways these teachers respond to challenges they perceive in the school as a workplace. The case examines the practices of newly qualified Australian VET in Schools teachers with extensive industry experience gained in their previous occupations.

This chapter explores a curious situation. On the surface, to other teachers and members of their school's executive group, Vocational Education and Training in Schools (VETiS) teachers in Australian secondary schools frequently appear compliant, conforming, and enthusiastically helpful in a variety of tasks that might be described as 'corporate citizenship'. They are often the ones who volunteer to drive the bus, to build the new school barbeque area, or to arrange the Christmas party. They are often prominent consumers of professional development offered in or by the school – or elsewhere – yet can appear as though they would rather spend their morning tea and lunch breaks in their specialist rooms (the wood workshop, for example), chatting and working with students, than join the other adults in the

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staffroom. As a result, they sometimes give the impression that they are secretive about their pedagogy.

Beneath this impression, however, there is a more sophisticated and complex story to be told about the practice of certain VETiS teachers. These particular VETiS teachers come from industry backgrounds with forms of vocational practice that cause them to disrupt the modes of teaching they experienced when they were students in school. At one level, VETiS teachers are unreconstructed constructivists; their teaching is almost entirely activity-based because their experience has been in the working world where jobs are hands-on and where developing problem-solving skills is a key to success. Also, as is largely the case with their own preferred modes of learning, their preferred mode of teaching is to offer opportunities for learning by doing. At another level, there is evidence that VETiS teachers from industry backgrounds have a particular kind of hybrid identity as teachers, partly formed from their industry experience, including their responsibilities for overseeing apprentices and trainees in the workplace, and partly through their formation as teachers in their teacher education program. They commonly see themselves as different from their colleagues. They relate to students in the same way they related to young people and co-workers they encountered on the job as tradespeople. Many VETiS teachers practise what numerous textbooks preach, but find themselves oddly at odds with some other secondary teachers who follow more traditional conventions of secondary teaching. In this chapter, we want to explore this situation as an example of contestation over ways of being a teacher – and of ways of enacting a teaching identity. We use the theory of practice architectures to tease out what this contestation is over or about, and how it is realised in particular forms of resistance by the VET teachers.

In order to tell this story, the chapter is organised in the following way. First, we briefly describe the context of VET in Schools in Australia. Second, we provide a brief synopsis of a longitudinal study of twelve novice VETiS and technology teachers in rural Australian secondary schools and highlight some of its main findings. Here, we sketch some of the features of the way these teachers operate, occasionally distinguishing their ways of working from the ways some other teachers work. Third, we outline how the contestation between these new VETiS teachers' and others' practices can be seen in the day-to-day life of their schools. Fourth, we indicate how this contestation can be understood in terms of (a) different ways of understanding the world, which can be noticed by what these VETiS teachers say, and the cultural-discursive arrangements that make their sayings possible; (b) different ways of enacting teaching illustrated through their work practices and pedagogies in the material-economic aspects of their work; and (c) different ways of relating to students and other adults in the school, and responding to social-political arrangements. To interpret these differences, we explore the particular ways these teachers practise, based on the life experiences that have formed them, culturally, economically, and socially. Finally, we draw the chapter to a conclusion by summarising our central argument and showing how the resources of the theory of practice architectures make it possible to show what contestation – in this case – is over or about, and how it reveals different ways of living the profession of teaching.

VET in Schools in Australia

To understand the hybrid context of VETiS in Australia, we need to examine both Vocational Education and Training (VET) in the post school environment and the world of schools, each with its own context and cultures. VET is a form of educational provision that is regularly delivered in VET institutions, by other providers, and in workplace settings. Since the 1990s (Cranston et al. 2010), a new senior curriculum in all states and territory education systems has included VETiS courses for senior secondary students. Typically, a VET curriculum is enacted as an accredited program leading to a qualification, and integrates periods of learning in educational institutions supplemented with training and learning experiences in workplaces.

Regardless of where VET is delivered, the site of each VET practice is prefigured and shaped by unique sets of practice architectures, composed of cultural-discursive, material-economic, and social-political arrangements present in or brought to the site (cf. Mahon et al. 2017, Chapter 1, this volume). Fundamentally, VET practice is prefigured by the traditions of specific vocations. Just as the distinct knowledge, skills, and tools for vocations (e.g., construction, hospitality, information technology and agriculture) have evolved over time and continue to be transformed in response to contemporary changes in occupational practices and in the kinds of arrangements (e.g., technologies) that support these practices, so too VET practice continues to be transformed in order to meet education and training requirements of a diverse range of vocations and industries. Furthermore, VET practice is prefigured by the economic conditions of educational institutions and workplaces, as well as "shaped by the interactional capacities of the people involved" (Kemmis et al. 2014, p. 97). At the overarching governance level, VET practice is prefigured by discursive regulations such as standards, qualification frameworks, curriculum, syllabuses and assessment guidelines; by national, state, and private organisational (material-economic) arrangements for VET provision; and by the social and political arrangements that enable and constrain particular kinds of relationships of power and solidarity among the different kinds of people (policy-makers, administrators, industry participants, teachers, VET students, and many others). In this vast territory, there is always room for contestation over language and ideas (for example, about how VET work is to be understood and talked about in educational terms, industry terms, and in classrooms); over forms of work and activity (for example, the work of policy-makers, industry partners, VET administrators, and teachers and students); and over power and solidarity (issues of power, like who can oblige, with whom to comply, policies or rules or regulations; and issues of solidarity, like who sticks together with whom in different kinds of situations when power is being exercised).

In this vast and contested territory, VET teachers' work is distinctly complex and multifarious, given that VET teachers are required to facilitate learning in diverse workplace settings that are subject to on-going transformation (Brennan Kemmis and Green 2013). The changing nature of work and work practices, as well as the ongoing configuration of particular practice settings, means that teachers need to

operate across numerous boundaries, yet within a regulatory environment governed by national organisational imperatives. While these enable many aspects of their practice, teachers often confront structures and compliance regimes that challenge their concepts of praxis[1] because they are required to balance three main practice sites with different practice traditions and landscapes – the institutional environment, the occupational field (comprising different vocations and diversity within these vocations), and the work sites where they facilitate learning for their students. Teachers' practice is thus influenced and mediated by a range of factors within and between the different sites in which they work.

The point made here is that, in every site, distinctive cultural-discursive, material-economic, and social-political arrangements prefigure, enable, and constrain VET teachers' practices. For instance, the culture and discourses of VET practice are reflected in the functional operations of VET institutions, occupational fields, and workplaces; the discourses of competency based teaching and assessment; the particular discourses of the worksite and work groups; the culture of work groups, students, and workers; and the status of the particular trade, the way it is regarded socially, and the way it is talked about.

For vocational teachers, successful teaching depends on their understanding of the workplace culture and environment, their response to demands on time and energy, their ability to schedule work to suit requirements at the site, their ability to deal with reluctant/resistant learners (e.g., being flexible and patient in their forms of relating to learners); and their ability to customise materials to be relevant to particular worksites. VET teachers need to understand what counts as work practice or vocation, as well as what kinds of activity and interaction enable learning, if they are to organise appropriate pedagogical strategies to facilitate learning. It is their intersubjective encounters with workplace supervisors, students, workers, and clients in work sites that help them realise the enacted curriculum for their students. Essentially, VET teachers construct their practice in a kind of reciprocal interdependence with other stakeholders within their educational institutions, those in the workplace, and their occupational field. It is mandatory for them, as VETiS teachers, to maintain industry currency.

In the case of VET in Schools, the traditions, culture, and practices of secondary schools also become part of the practice architectures for VETiS teachers and teaching. As VETiS teachers from industry backgrounds make the transition from industry to become teachers, they must learn to work in and with the practice architectures of the secondary school. As we shall see, however, some VETiS teachers are not only shaped by these practice architectures, they also shape them to meet the needs of industry and different vocations, the needs of VETiS pedagogies, and their own expectations about learning and teaching in VETiS subjects. Unlike their colleagues who have trained principally as school teachers, VETiS teachers from industry backgrounds have constructed a particular kind of hybrid identity which is founded on

[1] Kemmis and Smith (2008) define praxis as "action that is *morally-committed, and oriented and informed by traditions in a field*" (p. 4), and Kemmis (2010) also describes it as "history making action" (p. 9).

distinct industry experiences, including responsibilities for overseeing apprentices and trainees in the workplace. They do not see themselves just as teachers who completed a teacher education program designed for career changers (Allen 2007). They perceive themselves as agents of change in the life worlds of young people. Their new identity as teachers is primarily shaped by an amalgam of practice architectures of their past workplaces and those of the schools where they currently practise.

An Australian Case: Teachers from Industry Making the Transition to Becoming School Teachers

Until the 1990s, practices surrounding senior schooling in Australia have been concerned with academic subjects and pathways to higher education. Now, contemporary curriculum for senior secondary schooling offers vocational as well as academic pathways, which has led to an increase in the number of students enrolled in entry level vocational courses (Polesel et al. 2004). There is a continuing short supply of adequately trained VETiS teachers to implement the senior secondary VET curriculum. One approach to address this deficit is to attract and train experienced workers as teachers. This leads experienced workers from trade and industry into a new career: teaching.

The case presented here is intended to illustrate and explore the challenges facing newly qualified VETiS teachers in their chosen vocational or industry areas as they transition into their new careers. The case is based on a longitudinal study undertaken by one of the authors (Green 2012), following twelve newly qualified teachers who had successfully completed a university degree at a rural university specifically designed for career change teachers,[2] and who had taken up positions in twelve different rural schools in New South Wales (NSW), Australia. The twelve teachers had extensive experiences (at least 10 years for most) in trades including hospitality, construction, agriculture, horticulture, electrical, and information technology.

In the study, the majority of the data were derived from interviews, emails, site visits, and discussions with VETiS teachers themselves, with only a few interviews with other teachers and principals in each school. The study did not concern itself with other kinds of new teachers. The data were analysed using discourse analysis strategies (Fairclough 1992, 2003) as well as qualitative analysis (Creswell 2008; Denzin and Lincoln 2011; Gummerson 2007; Jager and Maier 2009).

In this chapter, we present a retrospective analysis using the lens of the theory of practice architectures of the school sites included in the longitudinal study[3] – with

[2] Similar pre-service VETiS teacher training courses are also offered by other universities across Australia.

[3] Throughout the chapter, 'the case' refers to the retrospective analysis presented here, using the lens of practice architectures. The empirical material was drawn from Green's (2012) doctoral study (referred to as 'the study' or 'the longitudinal study'), which did not use the theory of practice architectures.

their different 'ways of doing things around here' – to show how the distinctive *sayings*, *doings*, and *relatings* of the new VETiS teachers differed from those of their colleagues. The theory of practice architectures pointed us, through the distinctive sayings, doings, and relatings of these teachers (as evidenced in interviews, site visits, life histories and observation), to the cultural-discursive, material-economic, and social-political arrangements that made their distinctive practices possible. The theory also made clear to us that, through their *sayings*, *doings*, and *relatings*, these new teachers created alternative practice architectures in the school sites.

Unlike the situation in many other professions, new teachers are expected to perform all the roles and functions of experienced teachers from their first day on the job (Le Maistre and Paré 2011). The new VETiS teachers in the study were not an exception to this. They had to quickly find ways to operate within the rules, curriculum, and structures of their schools, and they were expected to immediately develop new vocational identities as school teachers. This was made more challenging by the reality of being in rural schools, where teachers generally have less support from colleagues and mentors – mainly because of the small staff size – and where there are more demands on new teachers who are the only ones teaching in their curriculum area (Haggard, Slostad, and Winterton 2006); i.e., they are required to be multi-skilled.

A further challenge stemmed from the VETiS teachers' discomfort in the 'world' of the school. Ten of the twelve VETiS teachers had not experienced senior academic school pathways themselves. All but three had left school at 15 years of age: one left to become the family's bread-winner during Year 9 after his father's death in an accident; most left during Year 10; only two completed Year 12, one badly, failing to get into a teacher education course. The other started a university course but left in first year to become an apprentice electrician. Also, many had been reluctant learners (or even 'the naughty kids') in school settings, so their experiences of school were not necessarily positive. Thus a main challenge for the new VETiS teachers resided in crossing the boundary between the practice architectures of their earlier career and the kinds of practice architectures they encountered in school sites when they were secondary school students many years before.

The VETiS teachers managed many of the challenges they faced by reinterpreting the sayings, doings, and relatings of the practices in their previous vocations to adapt to the needs of practice in the school sites. This is not surprising. Etherington (2009) found that "second careerists draw heavily on their experiences from first careers and these experiences continue to shape their interpretations, attitudes and beliefs about teaching" (p. 39). In the next section, we consider how this was so for the VETiS teachers in the study, focussing on how they practised differently from other teachers, and discussing the differences in terms of contestation between the practices of the VETiS teachers and the non-vocational teachers in their schools.

Contested Approaches to and Views on Teaching

When the new VETiS teachers commenced their new careers, they appeared to conform to existing practices in their schools. However, they quickly developed strategies to accommodate the changes. These accommodations included bringing into their classrooms relevant sayings, doings, and relatings that had been established during their lengthy periods of trade practice. Consequently, there were many observable differences between the sayings, doings, and relatings (and the project of the practice within which they hung together) of the VETiS teachers relative to the other teachers in their schools.

Myron, a VETiS teacher at a large inland NSW state high school, exemplifies some of the differences well. Myron is a former mechanic and car dealer, and, at the time of the study, was a teacher of Information Technologies. Like most of the industry transition teachers, he is a mature man with definite ideas about his role as a teacher: to ensure students learn enough to make them socially and economically capable citizens who will contribute to society when they finish school. During a school visit by the researcher, Myron was observed walking into his school site one morning. He looked at every student, greeting them with a comment or question for each one. These students were the 'early birds', first to school. Like them, Myron was usually the first teacher to arrive in the mornings. His tone and stance were casual and warm, as he kept moving through the grounds and corridors, like most people arriving at their workplace. Myron's tone, language, and deportment as he greeted the students were no different from his manner in greeting other adults and general staff. He was different, in this respect from other teachers in his school who adopted an observably distinct 'teacher voice' when interacting with students as opposed to other adults (although similar to most of the other VETiS teachers in the study). Nevertheless, the contents of his tiny conversations with students were diverse and very personal to each one, showing the knowledge Myron had gathered in the relationships he had deliberately built with as many students as he could.

Myron believes that the key to behaviour management is *relating* and connecting with the students he teaches and those he will probably teach in the future. His warm attitude to his students (whom he treats as young workers) was demonstrated in the first class on the same day when a Year 9 boy came to him with a 'Behaviour card'. Myron was supposed to sign and make comments on the card at the end of the class. "This is strange, Ben," he said, looking surprised. "I can't imagine why you would have this," he added. He threw the card on the table and moved into the activities of the day. As in a trade workshop, most of the students knew where they were in terms of their 'jobs': making scraps of metal into 'tribal jewellery'. Myron moved around the classroom continually, like a foreman, assisting people when required. In a Year 11 Information Technology class later in the day, he introduced the researcher as one of his former university teachers and challenged the students to "find her online". They were immediately engaged in finding the university and the researcher in several locations. They then moved on to the portfolio resume documents they were compiling for themselves. The recess bell went, but a number of students

chose to spend their recess time in the classroom completing items. Myron later explained he spent this time each week with a rotation of students.

The *project* of VETiS teachers' practice, including Mryon's, appeared to be slightly different from what is common among secondary school teachers. While most teachers want their students to do well in the subjects they teach, the VETiS teachers specifically wanted their students to do well in the world of work – a world very familiar to them. This was to be expected, as many graduates of career changing courses, such as the one from which these new teachers graduated, report that they enter teaching primarily to pass on their trade knowledge and to prepare excellent, job-ready school leavers (see Allen 2007; Anthony and Ord 2008; Etherington 2009; Halladay 2008; Lee 2011; Wilson and Deaney 2010). Also, as a group, the VETiS teachers were eager to make school different for 'less academic' students, even if that meant creating some kind of hybrid model of pedagogy in their own classrooms.

The VETis teachers' pedagogical approaches were accordingly oriented towards particular vocations and aligned with life beyond school. Their pedagogies, as exemplified by the description of Myron's practice, were project-based, and often quite different from more teacher-centred, text-based, and conventional pedagogies. The VETiS teachers demanded active rather than passive learning, and learning experiences were 'hands on'. Their expectations were clear to the learners and the observer. Their approaches drew on their experiences in assisting apprentices and trainees in their previous careers. Myron's foreman-like stance in the lesson while students undertook independent tasks is illustrative of this. The time Myron, and other VETiS spent with students in workshops outside of scheduled class time, for instance, further highlights this vocational orientation.

The VETiS teachers' ways of relating to students were an important and distinctive part of their practice. Myron explained how he related to students: "I tend to treat people … even though I understand they're adolescents and that sort of stuff … I try to treat them as I would if it [sic] were one of my employees." The tone of voice, the knowledge of the students both in and beyond the school and classroom, and the responses from most of the students themselves attested to this different way of relating, illustrated by Myron, but repeated among all the VETiS teachers in this study. The centrality, to the VETiS teachers in this study, of the *relatings* of their teaching practice goes some way towards explaining why these novice teachers reported (and their principals observed) very few instances of discipline and behaviour management problems during the 3 year research period. Relatings with colleagues was a different matter for the VETiS teachers. Outside of scheduled classes, they mostly kept to themselves, or spent time with their students. Many worked in relative isolation from their school colleagues and kept their practice private.

The differences between the practices of the VETis teachers and the practices of their non-VET colleagues can be understood as a contestation over ways of being a teacher. This contestation was particularly evident in the views the VETiS teachers' and other teachers expressed about their own and/or each other's practices. All twelve of the novice VETiS teachers in this study, although rather nervous about

commenting on more experienced 'traditional' teachers, described themselves as being very different from other teachers in terms of distinct VET pedagogies they applied, and with which they believed their colleagues were unfamiliar. To the VETiS teachers, approaches of the non-VET teachers seemed to reproduce old ways of working that did not appear to be useful as preparation for work, life, and society. One VETiS teacher, *Ralph*, for instance, contrasted his own practice with more transmissive approaches: "I am confident that I now have enough understanding of the ways we learn to not try and push ideas down the throats of my students. Instead, I lead them to learning". Non-VETiS teachers, on the other hand, viewed VETiS teachers as underqualified in terms of secondary and university education, having completed 2 years of teacher education (on top of their industry qualifications) instead of the more typical 4 year degree followed by or combined with teacher education. Contested views about approaches to teaching and what counts as good practice are further exemplified in the following description involving *Martha*, another of the VETiS teachers who participated in the study.

Martha was a novice VETiS teacher in her second year, following multiple careers in hospitality, 'dressmaking', and horticulture. She worked closely with Mary, an experienced non-VETiS teacher in the Food Technology department. Martha was observed by the researcher when teaching Food Technology to Year 10 boys. She explained that the boys signed up for Food Technology because they "like to eat". She understood well the boys' interests and crafted interesting stories during her classes to sustain their engagement, and to maintain strict workplace standards and practices. In successfully enacting the curriculum to appropriately and fully engage students in learning, she did not seem to have any particular problems. Her senior teacher, Mary, on the other hand, expressed concerns about Martha's general literacy. In particular, Mary was fearful of Martha making spelling errors on student reports. She also believed that Martha had issues with the level of reading required in a senior subject called *Family and Community Studies.* Martha's and Mary's measures of quality teaching were also contested: Mary focused more on academic literacy and exam preparation while Martha focused on student engagement. Mary's measures reflected the social-political arrangements widely accepted among the non-vocational teachers in the school. Her measures have a historical basis on which the secondary school curriculum is founded: literacy and academic English are standard measures of student success in schools, across all subjects. Novice VETiS teacher Martha was aware of Mary's view of the primacy of literacy in academic English, and confessed that she hated teaching *Family and Community Studies*, which was not part of her degree or experience. She believed that her survival as a teacher rested on maximising her teaching load in VETiS and Food Technology, because those subjects fitted her knowledge and skills base. She had also negotiated to complete an upgrade in her qualifications so she could teach textiles. To prevent errors on reports, Martha modelled her feedback to students on examples of 'prepared' comment sheets. Mary had kindly offered to check her reports for her so she was able to comfortably practise VETiS in the practice architectures of assessment and reporting in the rest of the school.

While Mary observed certain limitations in Martha's teaching practices, the school Principal had fewer reservations. Indeed, he said that he wanted all of his newly qualified teachers to be more like Martha because she experienced no behaviour management issues and quickly won over students with challenging behaviours. He valued her industry experience and described her as a natural leader within the VETiS team. He applauded her maturity and calm nature and acknowledged Martha's contributions as the head of the Occupational Health and Safety Committee.[4] The Principal also noted that Martha was using her dress making skills to prepare costumes for the school musical. In sum, while the Principal acknowledged Martha's success as being shaped by her effective use of VET pedagogies, and by the formation of her identity specifically as a VETiS teacher in his school, other teachers like Mary saw Martha in a different way. Martha was aware of these two contrasting views of her as a teacher and appeared to negotiate these differences adeptly in order to remain an active and constructive contributor to the school community.

Clearly, there was a disparity between the views of Martha, Mary, and the school Principal about what counted as important in being a teacher in this school. As we saw, there were some tensions between Matha's *thinking* and *sayings* about what was important in her practices and the *thinking* and *sayings* emphasised by other more 'traditional' secondary school teachers (represented by Mary). Mary evaluated Martha's work in terms of academic literacy, while Martha's focus was on preparing students for a particular vocation. Each also had her own way of *doing* teaching in the same school, evidenced in the respective pedagogical approaches: Martha's more activity-based, and Mary's more oriented to texts. The Principal's observations highlighted Martha's *relatings* with students, which were effective in 'winning over' students with challenging behaviours.

We might reasonably conclude that Martha's practice as a VETiS teacher was influenced by experience in her previous careers which led her to interact with young people as if they were young adults in the workplace – trainees or apprentices. Living this as an approach to teaching, however, did not necessarily sit easily with the practice architectures of her school, which emphasised academic learning, working on 'academic' tasks, and a hierarchical power relationship in which teachers instruct and students comply (and sometimes resist). Yet there is evidence that Martha was also able to influence the existing architectures and arrangements of her school – including the arrangements in, and setups of, her own classes – to successfully achieve her teaching goals as a teacher focused on preparing students for the world of work. This theme is developed further in the next section.

Our examples highlight significant tensions regarding conceptions of teaching and learning and ways of being a teacher within the VETiS teachers' new schools. It is clear from Myron's, Martha's, and Ralph's practices, experiences, and/or comments that VETiS teachers' conceptions appeared to be at odds with those of their colleagues in terms of how learners learn (e.g., through exposure to texts; learning

[4] Interestingly, nine out of the twelve new VETiS teachers were managing Occupational Health and Safety Committees despite being new teachers.

by doing); what counts as good teaching (e.g., leading students into learning; modelling academic literacy) and how a good teacher is measured (e.g., experience; qualifications); how best to relate to students (e.g., treating students as apprentices/less experienced workers and young adults; treating students as children); how student success is measured (e.g., literacy standards; job readiness; contribution to society); and the project of teaching as a practice. Instead of amending their practices to align with the accepted academic practices in their schools, the VETiS teachers practised differently, drawing on their experiences and their workplace-based practice to adapt to their new environment, their new profession, and their new project. They re-engineered and enacted their own ways of being a teacher, and in the process, created their identities as VETiS teachers.

Practice Architectures That Hold These Contested Approaches in Place

In this fourth section, we indicate how the contested conceptions, and the contested approaches we have described so far, can be understood as VETiS teachers' responses to tensions between practice architectures encountered in school sites and practice architectures of their former workplaces and careers. In the discussion, we simultaneously explore the practice architectures that shaped and made possible the distinctive practices of the VETiS teachers; some of the tensions between key school practice architectures versus former workplace and vocation-specific practice architectures; and particular ways in which the VETiS teachers responded to such tensions.

Of particular relevance to the VETiS teachers' practice were the practice architectures of the *senior secondary school*. Since all but two of the twelve VETiS teachers who participated in this study had not completed senior secondary school themselves, they sometimes struggled with the ethos and traditional practice architectures in the senior school where most non-vocational teachers are intensely involved in preparing students for the NSW High School Certificate (HSC) examinations. VETiS subjects are dual accredited which means students may sit an examination in a VET course. They often choose not to sit the VET exam as they may not be interested in an academic pathway. Instead they see value in the nationally recognised Certificate I or II in the vocational field they have chosen. Non-vocational and VETiS teachers appeared to value and work towards separate sets of goals: non-vocational teachers worked towards students' academic achievements, and VETiS teachers worked with students on their vocational knowledge, skills, and values. Effectively, contested notions of the *project* of the teaching practice in the senior school were being legitimised and/or challenged by practice architectures related to the senior curriculum (e.g., examination discourses, exam preparation procedures, and external assessment regulations), and the ways that teachers' negotiated and responded to these arrangements depended on their past experiences.

The following comment by Myron reflects the tensions between his past experiences, examination-related practice architectures, and the project of his practice:

> I believe my past experience allows me to see beyond school. Unlike many teachers I had at school – and still appear to be around – I am not interested in educating the students only to pass exams. I want them to learn things that will help them all their life; if they pass an exam it's a bonus. It is a bit like a driving instructor. They can teach you to drive, or they can teach you to pass the driving test. My aim is to instil in the students a work and social ethic that regardless of what career path they follow, they will be useful members of society.

Myron's beliefs (sayings/thinkings) about educating students for life rather than for exams – which were influenced, he suggested, by his previous career experiences – were in direct conflict with defining practice architectures within the senior school.

Past experiences in former workplaces and vocations evidently played a key role in terms of *cultural-discursive arrangements* that shaped the VETiS teachers' sayings. VETiS teachers used languages and specialist discourses in their everyday interactions with students that reflected the cultural-discursive arrangements of their former vocations. Discourse analysis of all data also showed that the participants used general job-related words such as *job, work, sacked*, and *training* in every interview and during classes. Teaching was aligned with terms such as *learning, skills*, and *projects*. Tellingly, on only one occasion was the word *children* used by a VETiS teacher in an interview. Martha used workplace language to explain her expectations. In one instance, she told a student who was not compliant about assessment work: "If you can't be bothered getting your assignment in, I wouldn't employ you". These cautions worked for her. She felt this was partly because the students could relate well to the workplace language, and partly because of the positive relationship she had with the students.

The VETiS teachers also continued to use the type of voice and conversational style reminiscent of their previous vocations, and this was generally different from the style used by other teachers in their schools. In essence, they spoke very informally, using a style and tone of voice which was usually much quieter than that of many teachers. Their voices did not change because they were in a classroom. They spoke to their students as if they were less experienced fellow workers under their supervision who were nevertheless individuals worthy of respect. When they wanted the attention of the whole class, they rarely raised their voices; rather, they moved to a central position and waited until they gained everyone's attention. So, instead of using voice as an instrument of power, VETiS teachers connected with students in other ways.

This conversation style is not attributable solely to the practice architectures of previous careers. Most believed that they would not have been like this if they had begun teaching at a younger age, like the majority of their non-vocational teaching colleagues who went from school to university and teacher education straight after completing high school, and who then returned to classrooms to teach. One of Myron's more supportive colleagues said, "It is the difference between those teachers who have never known life without 'Little Lunch' [a colloquial word for morning recess] and those who have spent their lives in the world of work". Martha, in

contrast, attributed her quieter voice in her teaching to her negative experiences as a school student: "I hate raised voices – my memories of school are dominated by teachers yelling at me to 'get out now'". She deliberately decided to not have conflict in her classrooms if this could possibly be avoided and instead spoke to students in quiet tones and a friendly manner.

The VETiS teachers in the study were challenged by some of the *material-economic arrangements* of the schools such as the practical learning spaces. In most cases, the new teachers from industry reconfigured the fabric of the school to afford opportunities for learning in workplace or workplace-like settings, thereby offering their students authentic experiences. Their intentions were to ensure that the activities and material setups of the workplace settings could support and enable relevant vocational practices. For example, as soon as *Mick* was appointed to his first school, he decided to launch the senior Primary Industries classes into a market garden enterprise. The Principal allocated an extensive area of the school ground for the project. Unfortunately, the river, which is a dominant feature of the town, broke its banks following heavy rain and caused unprecedented flooding just as the market garden was coming up for autumn harvest. The flood ruined Mick's project, but he – and his students – accepted this as a reality that local farmers experience. Although Mick was disappointed that all the efforts of students were destroyed, it did not stop him from starting an alternative project, as farmers tend to do. The harsh climate meant that learning was authentic; these Primary Industries students experienced the devastation caused by the flood as part of the highs and lows of agricultural life. Mick and his students immediately started a salad and herb garden in a higher section of the school grounds and went back to rebuilding the enterprise. Mick used the flood "as a big teaching aid" and implemented a more environmentally appropriate approach to the next garden project. He and his students supplied fresh produce to teachers, local enterprises, and of course to themselves: they thus became part of a real economy, doing work valued for itself rather than just as a project in the Primary Industries course.

Mick also arranged for students to volunteer to help local farmers at harvest time under an arrangement where the farmers 'paid' the school in kind: in grain, and in hay to feed animals raised at the school. The Head Teacher of Mathematics, who was Mick's immediate supervisor, was aghast at this entrepreneurial practice and complained to the Principal, who disallowed the practice, much to Mick's and the students' chagrin. The practice was stopped because it contravened the usual *social-political arrangements* governing school practice. This is a good example of how VETiS teachers' attempts at site-based education development (Kemmis et al. 2014) may be constrained by contrary social-political arrangements. The rules of the school constrained Mick's attempts to teach students within a barter system that is a normal practice in farming communities, even if sometimes at odds with tax law. It certainly turned out to be at odds with the social-political arrangements of the school. We return to social-political arrangements shortly.

Another example of changing the fabric of the school included rebuilding a storage shed as a welding space by *Lauder*, who taught in a small school in a town with unusually high numbers of unemployed people. This arrangement was highly

successful and Lauder soon found himself offering adult classes in Metals and Engineering to unemployed local adults in the evenings. The learning experiences gained in Lauder's welding shed fitted well within the school plans and he received accolades from the Principal.

In terms of the *social-political arrangements* in the school sites, the VETiS teachers were novices in the social space of the staff, and hence felt less 'powerful' in terms of the hierarchies in the site. Also, in some ways, the new teachers were challenged by fear of being regarded as 'inferior' by other colleagues on the basis of their being different from other teachers. VET in Schools has, from its inception, struggled with a lack of 'parity of esteem' (Billett 2004) compared with senior academic studies, and this was echoed to some extent in the concerns of the new VETiS teachers. Despite these new VETiS teachers being mature and highly-experienced in terms of their trade vocations, and in many cases holding senior positions or owning businesses prior to becoming teachers, their contributions and status were contested in the practice architectures of the schools, where VETiS teachers remained a minority.

This may partly explain why the career change teachers spent most of their school day either in the workshops or class areas or in the playgrounds, more or less consciously avoiding interactions with colleagues from other discipline areas. This was described as "retreating to their island of practice" and implied that opportunities to learn from and work with colleagues were missed. Mick explained that he did not interact with other teachers because he did not like to hear negative comments about students. He liked to make his own judgements. Paul was concerned that his colleagues might mock his enthusiasm for his classes and his new career. Myron explained that he did not like to speak in front of his colleagues as they thought he was a 'try hard' and his enthusiasm was often dampened by negative attitudes to his practice and his evident liking of the students.

While relationships of solidarity and power among the school staff (relatings) were difficult for an outsider researcher to explore, during school visits it was apparent that the types of relationships that career change teachers were developing with their students were not only quite different from those of other teachers in secondary schools as discussed, and thereby setting them apart from other teachers, the relationships had the positive effect of sustaining their efforts as teachers. This is reflected in Ralph's reasons for not interacting more with his colleagues: he wanted to spend time with those enthusiastic students who wanted to work on their projects during breaks. This sustaining effect is consistent with other research findings. In a study by Allen (2007) designed to examine acculturation of second career teachers to the school context, "career changers reported that the most important consideration in identifying as a teacher is the relationship with the students – positive student interactions led to satisfaction with one's position as a teacher" (p. 7). An Australian study by Richardson and Watt (2005) similarly found this to be a major feature, demonstrated by both career changers' practices and their reflections when asked what aspects of their new careers were most important to them.

Tess's introduction of a Cattle Club in her school is an interesting example of how VETiS teachers created arrangements that made possible particular kinds of relationships and relatings between teachers and students and between students and students. Students with reputations for poor behaviour often attended the Cattle Club. These students saw it as a privilege to be able to join because they had to demonstrate commitment and a good attitude before being invited to participate. A science teacher concurred that many of the 'very troublesome' students in the Cattle Club enjoyed the experience, and that their attitudes and attendance at school had improved over time. Tess's classroom was full of displays of medals and trophies that the classes generally, and the Cattle Club specifically, had won at agricultural shows, including a Reserve Champion ribbon from a large town nearby. Tess thus made her classroom a space of recognition, as well as one of belonging (via 'earned' membership into the club). This example shows that specific practices of *relating* can be a motivational factor for students, creating learning opportunities, and that Tess developed the Cattle Club specifically as a practice architecture that would privilege pursuits complementary to the syllabus. It also illustrates successful development of external links to industry and the community whilst supporting Tess's practice as an agriculture teacher.

As the stories discussed here show, what the VETiS teachers ended up doing during their first 3 years was creating the practice architectures of a workplace learning environment in their own classrooms and workshops. By "bringing the world of work into school" (as the Principal of Martha's school described it) in this way, these new teachers constructed 'islands of vocational practice' in their schools. They actually transformed their classrooms and workshops into authentic workplaces (Green 2015).

Conclusion: Different Ways of Living the Teaching Profession

As has been pointed out in earlier VET research, the educational practice of VET entails significant tensions for the VET teachers (Brennan Kemmis 2008). These tensions are between a strong national regulatory framework for VET (Wheelahan 2015), on the one hand, and, on the other, the traditions, histories, and practices of the different trades (Ray 2001). Brennan Kemmis (2008) points out that the traditions of excellence in work in the trades are powerful guides for the professionalism of people in the trades, and powerful motivators for experienced tradespeople to become vocational educators, both in the workplace and in VET and VETiS settings.

There is also an enduring tension between the regulatory frameworks of VET and other secondary curriculum requirements in Australia, and the specific needs of different groups of young people (Smith 2004) – a tension between the demands of teaching the curriculum and teaching the learners that is as old as education itself. VETiS teachers meet young people at crucial moments in their lives and their identity-formation, and the evidence of this study shows that they are extremely

sensitive about adopting teaching strategies that will respond to students' needs as the students develop their own vocational practice through their learning practices.

The Australian case cited in this chapter shows how the practice architectures of VETiS are composed of national institutionalised cultural-discursive, material-economic, and socio-political arrangements as well as arrangements that are to be found (and sometimes created) at each school site, and in each community. While it would be easy to caricature these differences, we have shown how those national and local arrangements shape VETiS teaching (both by individuals and in the collective practice of the VETiS teachers observed in this study) as rather distinctive: it is influenced by ideas, activities, and forms of relationship between people ordinarily found in workplaces and social settings. It takes very seriously the development of young adults in terms of preparation for the world of work through adapting vocational practices. As also shown, VET teachers draw directly on their previous experiences in their vocational areas when they enter the world of teaching. These personal and vocational experiences make up a strong foundation for VET practices whilst at times sitting awkwardly in the traditions and cultures of senior secondary education.

Put another way, in this chapter, we have seen the interplay between *learning at work*, (both for students on workplace-like tasks in schools and in their communities, and for teachers drawing on their own workplace experiences), *learning about work* (for example, from the VETiS curriculum and from the experiences recounted by these novice VETiS teachers), and *learning through work* (for example, in the project work of the students in these VETiS subjects, in these novice VETiS teachers' classrooms and workshops). We have explored this interplay using the lens of the theory of practice architectures. As we saw, VETiS teachers interviewed for this study drew on their industry knowledge and experiences to integrate the world of work into the formal educational curriculum. As new teachers, they were sometimes constrained by the existing practice architectures of their schools, but they also drew on their experience to create other practice architectures that would enable them to realise their view of what vocational education and training should be for the young people they encountered. And they learned to steer clear of some of the practice architectures of their schools that they believed might constrain their approaches to teaching or their views of the young people they taught – like avoiding the staff-room, and sticking with the students in the workshop or playground during recess and lunch breaks.

The case in this chapter shows that VETiS teachers often confront structures and compliance regimes that challenge their concepts of *praxis* because they are required to balance three main practice sites with different practice traditions and landscapes: the secondary school, the vocational or occupational field, and the workplace. Yet these VETiS teachers sustained a commitment to praxis both as "morally-committed, and oriented and informed by traditions in a field" (Kemmis and Smith 2008, p. 4) and as "history making action" (Kemmis 2010, p. 9). They did their best to honour the traditions of their vocations, and vocational education, and they did their best to prepare students with the knowledge, skills, and values to contribute to their own wellbeing as well as the wellbeing of their families, communities, and society.

The teaching practices of these VETiS teachers were formed not only by their teacher education, but also by their own school experiences, their own vocational experiences, and their own experiences in vocational education. The practice architectures of those settings shaped their practices, but their practices also produced new practice architectures that would permit them to practise their teaching as praxis.

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Chapter 8
Collegial Mentoring for Professional Development

Lill Langelotz

Abstract Various forms of mentoring and 'collegial learning' are often used to enhance teachers' continued professional development. Teachers' collegial learning is emphasised in the research literature as a keystone to achieving educational change. When teachers come together to scrutinise their own questions raised from practice, sustainable changes in teaching and classroom situations increase. However, there has been little examination of what kind of professional learning and educational change is possible in practices of teachers' continuing professional development (CPD) based on collegial learning. To understand what happens in the practice of CPD, and to examine what professional learning is possible in the specific practice, it is crucial to examine the arrangements that hold the practice in place. In this chapter, a practice of teachers' peer group mentoring (PGM) is examined through the lens of practice architectures. Foucault's notion of power is also used as a theoretical frame. This analytical approach brings new insight to what enables and constrains professional learning in mentoring practices.

There is a strong discourse in Sweden, as in many other western countries, concerning the (presumed) need for teachers' continuing professional development. In the wake of global educational comparisons like Programme for International Students Assessment (PISA), teachers' continuing professional development (CPD) is emphasised as one of the keystones for enhanced results, both in the media and in political rhetoric. Kennedy (2014) refers to this as a "global hyper-narrative" (p. 691), which is based on an idea that improved teacher quality will improve pupil outcomes and, in turn, increase the economic competitiveness of national-states. Kennedy argues, however, that the literature about teachers' CPD is under-theorised and fragmented. She calls for more sophisticated research that will shed light on the complexity of CPD and help to develop a deeper understanding, especially as there is a tendency towards policies with an instrumental and simplistic view on the relationship between teachers' learning and student outcomes.

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This chapter provides further input into the current discussion about teachers' continuing professional development in general, and more specifically, it is an attempt to contribute, by using the theory of practice architectures (Kemmis and Grootenboer 2008; Kemmis et al. 2014), to a deeper understanding of the complexity of CPD when practised as 'collegial learning' through peer group mentoring (PGM). Foucault's notions of power have also been adopted as a theoretical lens. According to Foucault (2002), power is always relational and it is exercised and productive rather than possessed and regressive. Power is fluid and there is power in all relations and it affects all actions. These theoretical and analytical approaches expose the arrangements that constitute and hold the practice of peer group mentoring in place. Furthermore, they shed light on what professional learning and development is constrained, enabled, and enhanced in peer group mentoring practice.

The chapter's focus is on teachers' CPD, based on a case study conducted in a Swedish secondary school over 2 years, and involving a teacher team encouraged by the Principal to participate in a practice of peer group mentoring to enhance professional learning and development. The teachers used a well-structured nine-step model of peer mentoring that will be outlined in this chapter. The purpose of the CPD project was to share teaching experiences so as to enhance pedagogical knowledge development. The teachers wanted to improve the teaching of what they described as a "new multicultural student-group from the suburbs" who had recently attended the school.

The following questions are examined in this chapter: *What kind of professional development was enhanced through the practice of peer group mentoring? Why was this particular development realised in this practice?* and *What did the practice architectures of the peer group mentoring practice look like?* The last two issues are illuminated first, and the chapter concludes by highlighting the professional development that became possible in this practice. Although a practice and its practice architectures, its participants, and the site in which the practice takes place are intimately entangled in a mutual and generative enmeshment (Mahon et al. 2017, Chapter 1 in this book), they have here been analytically separated to show how the theory and its key terms can help us to explore and illuminate a practice of professional learning and its outcomes.

Background and the Site

The practice of peer group mentoring discussed in this chapter occurred within a particular teacher team in a public inner-city secondary school in Sweden. In Sweden, teachers have been organised in teacher teams since the 1980s, with their organisation being stressed by a 1994 Bill (curricula Lpo 94; Lgr 80). The composition of teachers in these teams may differ, but frequently the teacher teams are structured around a student group. In this particular case, the teachers had been organised by the school management into teams of teachers who were teaching the same students but in different subjects.

Students attending this school were mostly from a well-educated, white, middle-class neighbourhood. The composition of the student body had, however, recently changed with the arrival of a new student group. The teachers and the Principal described this new group of students as a "multicultural student group from the suburbs that needed another kind of pedagogical tool". Since all students by law have a tax-funded 'voucher' based on the neoliberal principle of user choice implemented in Swedish schools and society at the beginning of the 1990s allowing students to choose to attend any school (public or independent) in their municipality, many suburban students choose to attend the inner-city schools. This decision to leave the suburban schools often leads to disappointment rather than an experience of something better. Historically, the inner-city schools have teachers who are not well prepared to teach multicultural student groups. They do not have knowledge in second language teaching and learning, for example (Bunar and Kallstenius 2006; Langelotz and Jämsvi 2008; Langelotz and Rönnerman 2014). Some of the teachers in the teacher team discussed in this chapter had been trained 20 or 30 years earlier for a 'monocultural' school system very different from that of today.

The formation and activity of teacher teams at the school, from the perspective of the theory of practice architectures, was directly linked to material-economic arrangements such as school budgets and funding from the government. Teachers had to leave teams, for instance, when the school budget was restricted. The possibility of having time for collaboration in the teacher teams was also tied to funding arrangements. The changed circumstances in the inner-city school in a neoliberal market-oriented and multicultural society thus constituted *the site* of the peer mentoring practice.

The teachers expressed their need to enhance their pedagogical knowledge in order to meet the new circumstances at school (and in society). As a response to the teachers' frustration, the Principal offered them continuing professional development (CPD) in the form of peer group mentoring (PGM), in their teacher teams. In line with the theory of practice architectures, the CPD can be understood as the *project* of the practice. This is discussed in the next section.

The Project(s) and Some Enmeshed Arrangements

The aim of the CPD, or in other words, *the project* of the peer group mentoring practice in this study, was broad: to improve pedagogical knowledge and to enhance student learning (in particular, in relation to the "new student group"). This is in line with how teachers' continuing professional development is defined in the Swedish municipal main agreement: "*efforts aimed at developing teachers' ability to create good conditions for students' learning*" (HÖK 12: M). Furthermore, it is noted that all teachers have the right to participate in CPD, and the point of reference is 104 h per full-time employee per year according to the agreement. This is another of the material-economic arrangements enmeshed in the project and the practice.

As mentioned earlier, the teachers used a well-structured nine-step model for the group mentoring in this project to achieve their aim. This nine-step model was a strong part of the practice architectures both in its physical (material-economic arrangement) and in its cultural-discursive form. The model 'stirred the participant into the practice' (see Mahon et al. 2017, Chapter 1, this book) through its explicit rules for how to speak and how to manage the mentoring practice.

Before the nine-step model and the practice of PGM are elaborated further, there is reason to mention something about the research project that became deeply connected and partly entangled with the project of the practice of peer group mentoring. The research project (a doctoral thesis project) was aimed at examining professional learning and answering the question of what 'makes' a 'good' teacher? The question can be understood in at least two different ways. Firstly, what does a 'good' teacher do? And, secondly: What kind of practices and external arrangements make (constitute) a 'good' teacher? (Langelotz 2014). Hence, both an epistemological and an ontological approach to practice have been applied. The approach used in the research project was based on a Nordic tradition of action research methodology, which shaped the actions undertaken in the conduct of the research practice. The researcher within this tradition is seen as an organic part of the project that is investigated, and equal to the other participants. Hence, cooperation and discussions among the participants (teachers and researcher) are seen as fundamental for knowledge production (Salo and Rönnerman 2014).

Accordingly, two parallel projects – teachers' continuing professional development and the research project studying the PGM – were here deeply related to the practice of peer group mentoring and the teachers' professional learning (cf. Langelotz 2014). Figure 8.1 below shows both these projects.

The research project and the teachers' CPD-project sometimes merged into a mutual practice where both the projects involved were nurtured and a communicative space evolved. A communicative space is, according to Kemmis and McTaggart (2007) elaborating on Habermas' concept, when people get together with the intent of reaching a mutual understanding and an unforced consensus about how to move on. Or as Habermas (1996) put it:

> Unlike success-oriented actors who mutually observe each other as one observes something in the objective world, persons acting communicatively encounter each other in a situation they at the same time constitute with their cooperatively negotiated interpretations. The intersubjectively shared space of a speech situation is disclosed when the participants enter interpersonal relationships by taking positions on mutual speech-act offers and assuming illocutionary obligations. Every encounter in which actors do not just observe each other but take a second-person attitude, reciprocally attributing communicative freedom to each other, unfolds in a linguistically constituted public space. This space stands open, in principle, for dialogue partners who are present as bystanders or who could come on the scene and join those present. (pp. 360–361)

The field notes from the study which this chapter draws upon read: "*I cannot not share what I see or what I think I see?!*" (Researcher's field notes, September 2008). In these notes a frustration of how to conduct traditional research (where the research project often is alienated from the ones that are involved) is obvious. Hence, the first

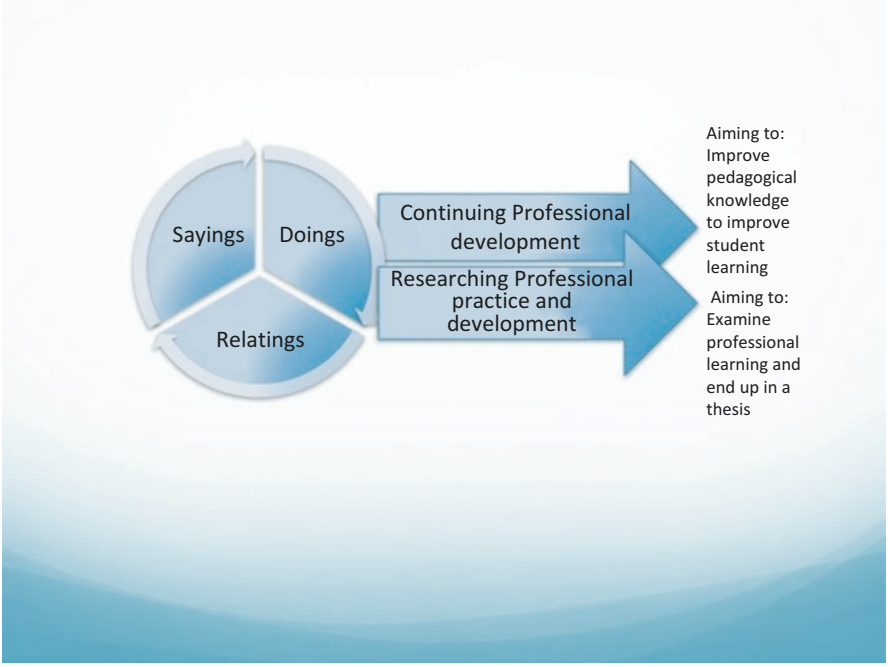

Fig. 8.1 Related and parallel projects of the practice of peer group mentoring

descriptive analyses from the research project were discussed with the teachers and the researcher role and approach were negotiated. Consequently, both the teachers and the researcher became involved in and affected by each other's projects (cf. Langelotz 2014). The involvement of the researcher (the research project) nurtured the professional development through deliberative discussions in the communicative space.

In other words, the research project and associated practices became social-political arrangements that enabled and sometimes constrained the mentoring practice and the associated professional learning, which is further elaborated in the next part of the chapter. Both projects were entangled in a cultural-discursive arrangement that included the concept of 'life-long learning' and an epistemological idea(l) according to which knowledge is seen as able to be shared and created among participants in a (learning) practice. These ideas can, with Foucault's (2002) notion of power, be interpreted as normative, disciplining, and sometimes constraining. Individual teachers may be stigmatised as poor if they do not share the epistemological approach (see Langelotz 2013b). Furthermore, the differences in the practice architectures entangled in the projects (CPD and research project) sometimes became obvious. When the teachers were asked to inform themselves and read the first analyses they laughed and said, "If we get paid". The teachers had no time whatsoever to go through the written material, although they were indeed engaged in the research and its (preliminary) outcomes. As a researcher I had the (paid) time

to review the discussions and questions raised during the peer-group mentoring sessions. These material-economic differences partly constrained the possibilities of developing the communicative space. The researcher role was negotiated to become that of 'a story teller' and I handed out written summaries at the end of each semester (Langelotz 2014). These summaries, which were also presented orally, enabled the teachers to develop a different understanding of the practice of PGM, which supported the professional development and the progress in the practice of peer-group mentoring. Both the increasing relations between the researcher and the teachers, as well as the impact of the peer group mentoring, is expressed in the following example:

> When you come, it cheers us up! And the PGM makes us see things in a new way (Two teachers (A-S & I) after PGM-session 4, January 2009).

The mutual communicative space entangled in the two projects became one of the arrangements that enabled professional learning. The research project and the project of peer group mentoring formed 'an ecology of practices' (Kemmis et al. 2014). In the following, further arrangements that enabled and constrained the practice of peer group mentoring are illuminated and examined. First, a few comments are made about mentoring.

The Practice of Peer Mentoring and Enmeshed Arrangements

Mentoring related to professional development is not a well-defined concept, and it is used in many contexts with different purposes and based on various epistemological and ontological perspectives. In an educational context, mentoring is used for beginning and experienced teachers' professional learning and can be performed as a group process, or with just two people involved. In group mentoring processes, an external facilitator is often used (Handal 2007; Lindén 2005). Teachers also facilitate each other's learning, however, in more or less organised forms. There are different models to support organised professional group mentoring processes. To enhance pedagogical knowledge and professional learning, the Principal, in this study, suggested the following nine-step model to the teachers for their mentoring practice:

1. each participant has the opportunity to present a case or a problem;
2. the participants choose one case to focus on;
3. a moderator and a secretary are appointed;
4. the case owner carefully describes the case/problem without any interrupting;
5. each participant raises one question each about the case until there are no more questions left;
6. each participant formulates his/her perspective on the case;
7. good advice is presented by each participant, one at a time;
8. the case owner describes how he/she is going to handle the problem, everyone reflects;
9. summing up: meta reflection – what do we need to consider to ensure a more fruitful next session? (Langelotz 2013a, pp. 379–380)

The model is a simplified version of the approach developed by Lauvås et al. (1997). It was outlined on a piece of paper that was referred to by the teachers each time to set up the mentoring practice. As an external artefact (and one of the material-economic arrangements), it stirred the teachers into the practice. The mentoring model also embodies cultural-discursive ideas such as 'the reflective practitioner' and the Nordic idea(l) of adult education, where the participants' knowledge and experiences are valued and provide a point of departure for further knowledge development (Langelotz and Rönnerman 2014). According to Lauvås et al. (1997), this model inspires teachers to construct common professional knowledge, professional ethics and professional practice based on teachers' experiences and knowledge gained in their own everyday practice. The authors use the expression 'the care of the Self' (Lauvås et al. 1997, p. 21), which is an expression that can be traced to Foucault (2002). In the book, *The history of sexuality: The cultivation of the Self* (2002), Foucault shows how this discourse is a self-regulated power technology with an individualistic discourse embedded.

Lauvås et al. (1997) emphasise the teaching profession's obligations to continue professional development and the commitment to care for the Self and the students. They point out that a reflective practice combined with peer mentoring can counteract fatigue among teachers. In other words, a discourse of collegial learning is here combined with an individualistic discourse similar to 'the cultivation of the Self' (Foucault, 2002). When 'the care of the Self' is combined with consultation (like mentoring) in existing relations, it contributes to an intensification of social relations according to Foucault (2002). This interaction is traced in the teachers' sayings. For example, the teachers in the study expressed the idea that they became a "better teacher team" when they were able to "collaborate and discuss pedagogical issues". The relatings in the teacher team emerged and combined with the cultural-discursive arrangements entangled in the practice, shaping the professional development (Langelotz 2014, pp. 83–84).

Apart from the PGM-model that stirred the teachers into the practice, other material-economic arrangements such as time and the Principal's management were enabling factors. The Principal rearranged the teachers' meeting time to enable the peer mentoring practice. Previous research emphasises the importance of principals to CPD-projects (Åberg 2009; Timperley 2011). The time aspect is also highlighted as one of the main resources to fulfil the aim of CPD in other studies (Opfer and Pedder 2011; Tyrén 2013). However, the management practice here included more than obvious conditions to enable professional learning. The Principal also took time to follow up the project in discussions with the teachers and in meetings with the researcher. In other words, the Principal emphasised – both in his sayings and doings – the importance of the peer mentoring practice and that he valued the outcomes. The outcomes were not, however, preconceived beforehand, which is emphasised as a crucial aspect for professional development by, for example, Timperley (2011). Neither were the outcomes measured in a traditional way. The Principal let the teachers themselves express, lead, and measure their learning processes. The approach was enmeshed both in the cultural-discursive and the social-political arrangements that enabled the project(s) and the practice to take place.

Social-political arrangements that also seemed crucial because they enabled and constrained the peer group mentoring practice included the teacher team, and the research-project that became enmeshed with the practice of peer group mentoring. In the teacher team there were prejudices and preconceptions about individuals as, for example, 'good' or 'poor' teachers, which sometimes constrained learning as a result of mentoring. The practice of peer group mentoring occasionally took the shape of a disciplining, corrective, and normative practice rather than a collegial and empowering one. One of the teachers sometimes became positioned as the poor teacher, and the practice (sayings) became normative rather than explorative (Langelotz 2013b). With the notions of disciplining and pastoral power (Foucault 2000, 2002) as analytical tools, the sayings, doings, and relatings show how the teachers sought the researcher's (and each other's) approval in their 'confessions' during the peer group mentoring. A disciplining scientific discourse, in which knowledge is seen as power, was manifested through the researcher engaged in the practice. Pastoral power technique is salvation-oriented and "linked with a production of truth – the truth of the individual himself" (Foucault 2000, p. 333). In the mentoring process this truth- and salvation-orientation is inbuilt in the model used by the teachers (cf. Langelotz 2013b, 2014).

The increased relatings among the participants (the teachers and the researcher) enabled, as mentioned earlier, the practice to evolve into a communicative space, where the aims of both parallel projects were discussed. A shared aim of the communicative space– to support and investigate professional learning – evolved and became a mutual interest. The teachers and the researcher discussed the first descriptive analyses, and through this an understanding of the teachers' practice and professional learning increased. Furthermore, changes in the everyday practice were negotiated in the communicative space. The research project was transformed into a catalytic storytelling project enmeshed in the teachers' CPD-project, which supported professional learning (Langelotz 2014).

When analysing the sayings, doings, and relatings that hang together within, and constitute, the practice, one main finding was that professional and personal development may be encouraged through peer mentoring. Democratic processes increased and seemed to have an impact on classroom practice and the practice of parent-teacher meetings (Langelotz 2014). These processes can be described as *disciplining*, *democratising*, and *developmental* for both the individual and the teacher collective (Langelotz 2013a).

Conclusions – Democratic Practices Evolved

The results from this study show that teachers' professional learning and development through collegial learning in the form of peer group mentoring are far removed from something easily measurable and transferable. Rather, this learning is part of a complex web of intersecting practices and practice architectures. The practice architectures that hold the practice in place have an impact on what kind of learning

is possible and desirable to develop in the specific site where the CPD-practice takes place.

This study found that the teachers in this site developed communicative talents through the practice of peer group mentoring. These talents were described as an advanced ability to listen to each other in a "better way" and that "all voices became important", as the teachers expressed it. The ability to listen carefully without immediate judgement was, according to the teachers, one of the most important learning outcomes in the project of professional development. Furthermore, the teachers formed a collegial approach and aptitudes for cooperating and acting with a collegial responsibility, which can be understood as an important aspect of teacher talents in this site. They literally illustrated with their hands, while they expressed their thoughts orally, how the mentoring practice enabled them to "put the problems on the table" and (most of the time) they strived towards looking at the problems presented during the peer-group mentoring as collective issues rather than individual ones (Langelotz 2013a, 2014). The practice of PGM encouraged the teachers to 'de-privatise' (Kemmis et al. 2014, p. 140) their classroom practices.

Overall, the increased communicative capacity and the de-privatisation of the teaching practice seemed to enhance the teachers' democratic abilities, perhaps changing the power relationships that previously existed, and possibly challenging the kind of "care of the Self" (Foucault 2002) that was anticipated when the PGM project was imposed on the teachers. They involved each other, the students, and the parents of the students in decisions concerning classroom practice (Langelotz 2013a). Biesta (2003) points out that an education that provides students with the opportunity to truly act helps the students to become subjects. When the teachers discussed the students during the peer mentoring practice, they sometimes managed to go beyond stereotypes like 'a troublesome boy' or 'a silent girl' and the students became subjects rather than objects in the teachers' perceptions. The teachers sometimes managed to look upon each other in new ways and go beyond their presumptions – the colleagues could become (and construct themselves) as subjects, vis-à-vis each other. Biesta (2003) emphasises that the opportunities of becoming a subject engender democratic situations (Langelotz 2014). Professional learning that stimulates democracy and educational actors' possibilities for acting is of course extremely important in a world where democracy has to be re-constituted every day. In the Swedish curricula, teachers' ability to *teach democratically* and not only teach about democracy is strongly stressed.

By employing the theory of practice architectures, various models of teachers' continued professional development could be analysed in relation to sites and the specific architectures to be found in them. The theory may help us to better understand how the cultural-discursive, material-economic, and social-political arrangements with which mentoring practices in a particular site are enmeshed impact on teacher professional learning in that site. Peer group mentoring in another site, however, might well lead to other and partly different professional learning for the teachers involved.

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Chapter 9
School Development in Tough Times

Lena Tyrén

Abstract In schools in Sweden today, researchers are encouraged, through national polices that highlight the importance of research in the profession in relation to school development, to work with school teachers in local development projects. One way to implement school development is to use action research. For action research to be effective in supporting school development, a number of conditions need to be met. Drawing on an action research project in a municipal public-sector comprehensive school (Swe. Grundskola), I examine what happened to school development and ongoing action research when the school as an organisation was put under pressure from the impact of economic restructuring. I use the theory of practice architectures in the analysis to describe what enabled and constrained participation amongst teachers, the school principal, and the researcher. Cultural-discursive, material-economic, and social-political arrangements within the school, which were shaped by global and national economic factors, are shown to have played an important role regarding research possibilities.

In schools in Sweden today, school development has become an important part of school life. Action research has been central to many school development projects because it offers tools for creating conditions in which the practitioners and researchers have a collective responsibility to develop and improve educational practices (Carr and Kemmis 1986). In action research, the theory and practice addressed by the researcher(s) are related to the practice that researchers, and those they research with, want to develop and change. Action research is also about generating knowledge of how change takes place, and what happens during the process. The relationship between the conduct of practice and understanding what is going on is a key issue.

Action research is believed to contribute to better professional practice as teachers engage in the learning processes that action research involves (Carr and Kemmis 1986). However, for action research to be effective in the development of professional practice, a number of conditions need to be met (Tyrén 2013). These conditions include continuity of participation and access to the field, along with time for

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reflection and the possibility of developing stable social relations and critical friendship groups (McNiff and Whitehead 2002). Also required are commitment from school staff, support from leadership, and the presence of organisational arrangements that provide teachers with the time and support necessary to engage in research-based development work. Supportive policy at the national and the regional level is also important, and, while national policies supporting the use of research for school development work do exist, the role of policy is somewhat contradictory: supportive policies are contradicted by the presence of policies of economic restructuring and New Public Management. These latter policies have impacted negatively on the time and space teachers are given to engage in reflective activities in relation to their working duties and professional responsibilities (Tyrén 2013). According to current policy, Swedish teachers are required to conduct school development programs and contribute to the development of knowledge within their schools. Yet, at the school level, organisational changes have not always occurred in ways that support these new responsibilities for teachers and their professional action.

In this chapter, based on research I conducted at a school that I refer to as Tower School, I examine the issues associated with contradictory education policies. I look specifically at what happened to an ongoing action research project and school development program when the school as an organisation was put under pressure from the impact of economic restructuring. I attempt to account for what happened both practically and theoretically in relation to organisational changes, especially changes in the material-economic and social-political arrangements of the school.

The theory of practice architectures was employed to understand and interpret the teachers' situation in the specific school development practices. The theory helped to grasp analytically how practices are constituted and interlinked, and what opportunities and barriers existed and arose in the development of practice in Tower School.

From the outset of the research, three key concepts were considered fundamental: time, organisation and technology. In this chapter I pay particular attention to time, but I also show how an unstable organisation affected teachers, the researcher, and the on-going empirical study in terms of how we were able to participate in, and implement, action research-based school development as had initially been planned. The discussion highlights some of the main implications for practices within the school, including from a social justice perspective, and shows how staff were able to overcome some obstacles because of their commitment and interest in school development. I conclude the chapter with a discussion of the theoretical and practical utility of the concept of practice architectures when it comes to examining action research as a way to implement school development at Tower School.

The Context and Case of Action Research and School Development at Tower School

Practices may be described in different ways, depending on the theoretical perspective one adopts. This study is based on the description of a practice offered by the theory of practice architectures. Kemmis et al. (2012) describe practices as embedded in practice architectures, which are the arrangements that enable and constrain practices and their characteristic sayings, doings, and relatings. Sayings, in the study reported here, relate to how the teachers talked about, and what they said about, professional education work, with me and with each other. Doings relate to what was done in education work, including how we could use action research in school development at Tower School. Relatings concern relations between people and between people and things in education work, including how we could connect activities and people and things in the action research project. Relatings include how teachers relate to each other and to political documents (Kemmis et al. 2014).

On this view, practices are not shaped solely by the people who participate in them. Practice architectures provide practices with meaning and significance through sayings in the language; through doings in actions and activities; and through professional fellowship and solidarity among participants in their relatings, in the medium of power. Thus understood, a practice is an interactive space in which people meet, act, and interact with each other (e.g., Kemmis and Grootenboer 2008; Schatzki 2002).

The Nature of the Study

In Sweden, national policies have highlighted the importance of research for school development for many years now, at both national and local levels. As an educational researcher, I was contacted by one of the teachers at a local school about my willingness to participate in a project on the use of computers as tools for learning to read and write for children aged 6–9 years. Tower School is a municipal public-sector comprehensive school (Swe. Grundskola) with about 710 pupils from 6 to 16 years and about 100 members of staff. Class-teachers, pre-school class (reception class) teachers, and leisure-time teachers[1] working with Grades 1 and 2 were involved in the school development study. In total, 18 teachers in eight classes participated in the study, which was conducted between 2008 and 2010.

Initially, the aim of the project was to describe and analyse the educational value of computers for school children aged 6–9 years as a tool for learning to read and write in Tower School. The study was not based on a desire to change the practice of others, but rather to change things together with others (Reason and Bradbury 2008). Given their aim of school development, teachers formulated a particular

[1] Teachers with a specialisation in leisure/recreation activities.

analytical interest regarding their own practice, and this interest, as it unfolded, directed the development process (Tyrén 2013).

As a researcher, I took on different roles. My first role was to encourage participating teachers to look at their own, and at the pupils', development and to consider the changes and improvement of education in relation to what was happening in the classroom, especially with regard to changes brought about through the pupils' usage of the computer. My other role was to study the development process itself – along with my own part in it.

Before the District-Level Economic Restructure

The initial phase of the project at Tower School went more or less according to plan in the first year, 2008/2009. The staff and the Principal at the school supported the project and most conditions necessary for reflective action were in place. The cultural-discursive, material-economic, and social-political arrangements comprising the practice architectures of research, leading, and educational practices in the school supported or made possible commitment of staff to the project; time and space for individual and collaborative reflection; positive relationships between staff, and between staff and me as a researcher; and productive exchanges between the teachers and me.

Among the enabling material-economic arrangements were those created or used by the Principal (through her leading practices) to allow or provide time for reflection, a necessary condition for action research (McNiff and Whitehead 2002). The Principal made commitments to supply some timetable space for participating teachers. The timetable space meant that all teachers had the opportunity to participate, and had the time available for diary writing. Teachers were able to research their own practice and draw on that research to consider how they might improve their teaching. They had time to reflect on their professional roles. Making such an arrangement was in line with the Principal's mandated responsibility to lead the school's development towards national targets, to create conditions for teachers to engage professionally with each other, and to support the learning of each pupil. The national targets are formulated in the Swedish curriculum for preschool (Lpfö98) and primary school (Lgr 11).

The Principal also established organisational routines that enabled teachers to implement plans for school improvement and for me to follow what happened. I followed and documented the development process, inquired into the procedures employed, and met regularly with the teachers. Overtime pay was made available to support meetings after school-hours. This allowed meetings to be scheduled in the evenings when all teachers were free from teaching and other activities. The Principal additionally allowed us to use the school premises for our meetings.

These organisational arrangements (i.e., timetable allowances for reflection, the scheduling of evening meetings, overtime pay, and new organisational routines) were enabling material-economic arrangements that resulted in *good working*

relationships. Action research is dependent on social relationships. In fact Grant et al. (2008) have pointed out that good relationships are central to the successful implementation of action research. This includes relationships between the researcher and practitioners if the researcher is an outsider. Where the researcher is an outsider, he or she has the responsibility to gain the trust of the participants in an action research study (Grant et al. 2008). Things like the evening meetings created the conditions for necessary positive relatings, and allowed me to spend time with the teachers, building trust.

Such positive social-political arrangements made it possible for us to make significant progress. During the first year, 2008/2009, we could see that the action research project enabled school development. However, this would soon be tested by changes at a school and regional level brought about by economic change at a national level.

Changing Conditions for Action Research and School Improvement at Tower School

In Sweden, a much-publicised economic crisis hit hard at the municipal level, and cutbacks in school activities across municipalities ensued. Many municipalities were forced to review their finances, and savings measures were introduced, leading to material-economic arrangements that constrained educational activities. In the region where Tower School is located, educational restructuring resulted in significant changes within the organisation of comprehensive schooling. The region was obliged to save four million Swedish Kronor.

For Tower School, this meant that about 14 staff positions were to be withdrawn. Although not all services were teaching posts, these cutbacks were still significant for the working conditions of teachers. The Principal also now had responsibility for a reduced budget. The budget dictated what school activities were possible. The Principal's mandate was to support the best possible educational activities and try to save teaching positions, but she had to operate within the school's budget. To keep the school budget in financial balance, she had to prioritise, make decisions, and take actions that had consequences for the educational activities and teachers' work situation. Directives by the Principal saved the action research and school development, and made it possible to continue, but not exactly as initially planned. The Principal was forced to revise school operations and reallocate funds, both of which, as I will show in this section, constrained the action research project and school development.

Changes to material-economic arrangements at Tower School in the wake of the economic restructuring were immediately obvious. The school year 2009/2010 began with changes to staff and staff teams. Several of the teachers did not have permanent contracts and some lost their jobs. Others were moved around to other parts of the school, which meant they were teaching new classes and had new duties

and new working relations to establish with new sets of parents. In this period, some teachers came back from maternity leave, others chose to try working in other schools, and supply teachers were not given extended employment. The school as an organisation now lacked stability and the group constellation changed.

These changes affected working conditions for teachers (through redundancies and transfers), the pupils (through changed teachers), and the researcher (through the changed conditions for conducting action research). As some participants in the action research study had to leave, there were difficulties trying to replace them. There were changes in who participated in the project and why. So, the project too was destabilised by the new staff arrangements.

An impact of the reduced budget was that the Principal could not support an organisational arrangement regarding teachers' time (especially time for meetings) on the same scale as before. Meetings had to be fitted into a much tighter schedule or carried out on a voluntary basis (meaning that some of the teachers participated without financial compensation from the school). Also, overtime was no-longer allowed for primary school teachers, which had a detrimental effect on the design of our evening meetings. It became clear that if no time could be set aside for joint meetings, and there were no opportunities for common conversation, it would be difficult, if not impossible, to organise, initiate, and monitor long-term change, and improve and develop educational activities. Time was made for meetings during the day, but it was restricted and it did not suit all teachers. As one participant noted,

> Our hope is that we can meet on Tuesday afternoons, instead of in the evenings as we have done. … But it's not so easy with the preschool classes (Participant comment, evening meeting, 2009-08-12)

The implications of this for staff relatings are discussed shortly.

Reduced funding for resources also affected school development. It limited the possibility of purchasing materials to continue developing the use of computers as writings aids, a goal linked to implementation of the school development plan. Classroom practice was directly impacted by this.

Changes to the social-political arrangements were also very obvious, and again, these impacted negatively on the school development program and action research project. The changed meeting times prevented certain groups of teachers from meeting at the same time. Specifically, the preschool teachers and leisure time teachers had less time in the classroom, which impacted on their capacity to undertake work associated with the school development project. Additionally they could not attend meetings in the afternoons. They were therefore, in effect, excluded from the school development project. This hindered the professional work of the preschool and leisure time teachers, and disturbed the relations between the different groups of teachers. Less opportunity for joint planning meetings constrained the potential for collegial cooperation as manifested by the school development project, and affected the way we carried out the action research and how we could develop school activities. The duties of the teachers in the classrooms were altered, and commitment to the school development project across different groups of staff was affected as a result.

Being removed from the school development project also meant that the preschool teachers and leisure-time teachers were no longer able to participate on equal terms with other groups of teachers. Different conditions now applied for different professional groups within the same school. Varying employment contracts and varying opportunities for participating in staff activities can put relatings among different groups of teachers to the test. This is what appeared to happen.

It is in social space that relationships – or relatings in the terminology of the theory of practice architectures – are created. This includes relationships between teachers, between teachers and the Principal, as well as relationships between the participants and the researcher. The social space at Tower School had changed significantly. The instability of the organisation and the altered social-political arrangements discussed affected relationships. Relationships among teachers and between teachers and the Principal became particularly strained when certain groups were excluded from meetings. The Principal had used her powers to make decisions that led to this exclusion; it was not a decision that the teachers were able to influence.

For me, as a researcher, relatings in the action research project meant becoming a well-known person to the teachers during the first year in the project. The teachers experienced me as a person who was involved in their action research project and school development program, and who was interested in the changes taking place in their practice. I was an outsider who had the responsibility to gain the trust of the participants in our action research project (Grant et al. 2008). However, my relations with teachers were tested by the staff changes that came with the restructure.

When new participants come into an on-going action research project they might not have the same cause to accept participation as their predecessors have. One of the new teachers who participated in the action research project was Jessica.[2] She had been on parental leave for a year and a half. Jessica was more or less thrown into the on-going action research project. It was assumed by the Principal that Jessica would be familiar with the methodology and approach from the outset, but this was not the case. Jessica did not receive any significant background information about the school development program and was therefore understandably hesitant and uncertain about the process. Jessica expressed her concern about the purpose of the school development project and about my role and presence at the school:

> I only know that it will be so much a question mark, then I do not know what it means. So, Lena, what is your role in this? I do not know why we have meetings or so.

If teachers do not feel part of an action research project, it is difficult to create good relationships and commitments in the project. Jessica was not comfortable with the project and felt like she was not part of it. Later she reflected:

> Yes, I think it's a bit tough when you do not know. … I needed to know why you do it. The purpose of it all before I can feel comfortable about it. So it's a bit tough. But now I feel more secure. Because I know … why we have meetings and why they meet there and stuff. I found it hard in the beginning when I didn't know.

[2] The names that are used in the study are pseudonyms and not the teachers' real names.

Talking to Jessica, I came to appreciate some other difficulties she experienced when she returned to the school that might also account for her initial reaction to me and the project. Firstly, Jessica had reacted against the major changes that had taken place at the school during the time that she had been on leave. She described her amazement at how fast an organisation can change, and it became quite clear during our conversation that stability was important to her. When I asked "How important is a stable organisation?" she replied:

> Very important. Security is everything. I wasn't actually that sure things could change so much in a year and a half as it had done when I came back. A lot of people felt bad about this. I did not think it was so important before but it is very important. All problems and decisions you take, it is so much better if you know you have someone behind them. It's really important.

Jessica's comments signal what several researchers highlight (e.g., Fullan 1991; Huberman and Miles 1984) as one of the most important factors for change and improvement in school activity, i.e., a confident school management and stable teaching staff.

The second difficulty that Jessica raised with me related to her participation in the project. Zeichner (2001) argues that voluntary participation is important for action research; the research question should be based on the participants' own interests and their own practice, and hence their interest in school development. Unfortunately, Jessica felt that the Principal had ordered her to participate without giving her a choice:

> It was how it seemed. 'This is the action research project, please join in'. We do not know what it means and you do not know how much work it involved for us. But when you buy into it so, and begin to believe in it so we will also understand the benefits of it. But we must come to that realisation. And that took almost six months I think.

Care was clearly needed to ensure that teachers did not feel forced into participating.

Changes to cultural-discursive arrangements were more subtle, but, along with the changing economic and social-political conditions, they had important effects. Economic language, for instance, became part of the way people talked about changes that were happening at Tower School. The changes to the meeting arrangements, for instance, were an 'economic necessity' in the words of the Principal. Elsa, a teacher in grade one (2008–2009) described the altered conditions after an observation session in her classroom. We talked about how she would like to develop computer writing the next academic year. She said:

> I think it feels a little difficult now, for various reasons … we have no money … And so I do not know if we will be able to afford … to continue … in the way I had hoped for … you know we will have to save four million here at school now. Fourteen posts … must go … These changes affect the course.

Elsa's sayings here describe changing material-economic arrangements, but they also highlight how concerns for cost-saving shaped the discourses used to talk about teaching practice.

The way that *time* was conceptualised and talked about in the semantic space at Tower School is another example. Teachers expressed their awareness about having

dedicated time to meet for discussion and reflection so that they could talk to each other about what was happening in the school and discuss changes to improve teaching practice. After the economic restructure in the municipality, time was treated as a cost rather than a professional and pedagogical resource. It was shifted discursively into something to be *allocated, regulated, or saved* rather than dedicated.

Continuing School Development and Action Research in Tough Times

Although the action research and the school development program were negatively affected by the changes happening in the organisation, the project continued and there were ways in which the school development process and the action research made it possible for teachers to cope and to maintain their commitment with the 'tough' conditions they were experiencing. Elsa, who was the union representative for one of the unions at the Tower School as well as a Year 1 teacher, explained how involvement in the project helped her. At one point, Elsa lost motivation for teaching in general and the action research project in particular:

> Of course a lot has happened at the school that I'm involved in and creates extra pressure on certain occasions. You know I'm union-engaged and then it will be that I will take a lot of the others' concerns. Sometimes you can put it on the side but it does not always work. I feel that I got new energy after the last meeting when we could talk about all these pesky things … It gave me new energy to continue working and go on.

Elsa emphasised the benefits of meeting colleagues to vent emotions about what was happening and to seek strength and inspiration to go on. Elsa appreciated the exchange with colleagues at our joint meetings. Talking with colleagues was important to her because it provided the opportunity for people in the teachers' team to help and support each other. Elsa said that teachers give each other the knowledge and power to move forward in the social space where relationships are given the opportunity to develop. Several teachers similarly described the value of support from each other and the importance of giving each other the knowledge, confidence, and strength to go on.

When the Principal gave new directives, and financial savings ensued, my fear was that our cooperation would be forced to cease. Our meeting times were, however, adjusted to fit in with the new meeting schedule at the school and I found new forms of co-operation with some of the teachers who gave me continued access to the teachers' practice. We arranged opportunities for informal talks and observations in some of the classrooms instead of joint meetings. It gave me the opportunity to meet the teachers in new constellations.

I continued to have access to practice and to have the confidence of the staff since I was a person everyone was familiar with by the time the changes began. The first year had been very important. We had created trust and good relations. As mentioned

earlier, this is an essential requirement in every action research study (cf. Grant et al. 2008), and social-political arrangements established through our initial year together prior to the changes enabled continuous positive relatings. It would have been less simple for a newcomer to engage in the school's activities at such a difficult time.

Discussion

One of the clear contributions that the theory of practice architectures can make to action research and school development as a socially just practice is to foreground and render visible the inherently political nature of school development; i.e., as a practice bound up with power through its enmeshment with cultural-discursive, material-economic, and social-political arrangements. It was evident that the pressure to make financial savings, stemming from external material-economic pressures, restricted the Principal at Tower School in terms of providing resources for school development with the support of action research. When the school budget became seriously limited, the Principal had to make decisions that were not always appreciated, and that in some ways contradicted her commitment to school development. Some decisions had negative consequences for staff participation; staff relations; the learning process; and quality outcomes.

It is easy to put the blame on the Principal when there are economic cutbacks, but the Principal of Tower School was only performing a mission to reallocate resources in response to contradictory political decisions that were made elsewhere. That said, there are implications here for leading practices. Leadership has to be committed to a school improvement process that can be supported by action research. The realisation of professional responsibility should not be driven by financial savings or economic efficiency measures.

Time turned out to be crucial to the success of the school development project at Tower School. This is not surprising, as lack of time is considered to be the greatest obstacle for undertaking action research successfully (e.g., Megowan-Romanowicz 2010); time is clearly a prerequisite for teacher participation. The findings of the study showed that, if school development is to generate change and improvement, teachers need to have dedicated time (as an opportunity and as a resource) to meet for conversation and reflection. At Tower School, time was key to teachers being able to reflect on and manage school development, and therefore also to conduct an action research study. It was important that arrangements for extended time, and time to meet, talk, discuss, and reflect on common issues and concerns, were in place.

A tension emerged for the school staff and the project, however, because of the subjection of time (as a commodity or a cost) to economic control. The political decision to couple time with economic arrangements such as budgets is a tradition superseding the project by centuries (Winther 1998). Winther (1998) commented that budget decisions often lead to teachers' time being increasingly viewed as

merely a cost. A time limit is introduced to generate 'efficiency'. This in turn tends to reduce the scope for professional development and creativity and thus the opportunity to engage in school development with the support of, for example, action research. This occurred at Tower School when economic concerns shaped how time was understood and spoken in people's sayings, allocated or dedicated in people's doings, and regulated in people's relatings. The heavy regulation of teachers' time meant that teachers had less control over how their time was used, while the language about time reinforced the notion of time as a cost. Thus, cultural-discursive, material-economic, and social-political arrangements around time can be significant in terms of what enables and constrains an action research project and school improvement. Treating time as a cost is counterproductive when it creates conditions that unnecessarily inhibit efforts towards school improvement. The commodification of time is a problem when economies tighten. This has repercussions in terms of the availability of commodified labour time for staff to engage in projects such as the one at Tower School.

Some of the arrangements at Tower School, such as the new meeting schedule that resulted from how time was reallocated and regulated by the Principal, had particular social justice implications. As explained, the new meeting schedule excluded two groups of teachers from the project. This prevented those teachers from fulfilling their obligation to conduct school development and contribute to the development of knowledge within the school. School development and professional development is a mission that is included in the teaching profession according to the Swedish school plan. It is part of the Principal's mission, a legislated expectation, to provide opportunities for staff so that they have the professional knowledge and skills required to perform their professional duties. So, decisions about meetings and overtime pay affected the teachers' work conditions and their opportunities to continue as planned, but also how they were able to exercise their right to professional development as detailed in the Swedish curriculum. Furthermore, as observed by one of the teachers, the ongoing action research project and school development was an opportunity for teachers to engage in and control professional development for themselves. Some of the teachers were denied this opportunity.

On a positive note, the project also showed that when the opportunity arises and is established through action research, barriers can be overcome and professional teachers can continue to develop innovative and creative teaching-learning practices, even under difficult circumstances. Perhaps this is due to the power that comes from solidarity between colleagues when they work through the action research process together. Also, when school development planning is firmly implanted in a school as an expectation among teachers (i.e., as an embedded cultural-discursive arrangement), there is hope for a favourable common goal of school improvement for all rather than only where it can be afforded.

Conclusion

The theory of practice architectures foregrounded what enabled and constrained an ongoing action research project and school development at a particular school and has helped me identify how the teachers at Tower School discuss, act, and create relationships, and how practices are shaped and moulded by the practice architectures with which they are enmeshed. In other words, it has contributed toward identifying what was facilitated and what was impeded by both internal and external factors. The practice architectures created by economic conditions, and associated management decisions, impacted on the actions of the teachers and constrained development to different degrees in different ways across the school over time.

The theory of practice architectures, put to work analytically, has formed a lens for the analysis which helped me to see what enabled and constrained practice in the school with respect to the sayings, doings, and relatings of teachers and the researcher. What was happening in the physical space and its material-economic arrangements appeared to affect things most profoundly on the surface, but in reality, it was the material-economic arrangements *together with* cultural-discursive and social-political arrangements that influenced what school development and action research was, and was not possible, at Tower School.

In this chapter, I attempted to render visible how particular practice architectures affect possibilities for action research projects and school development. What took place at Tower School is not unique in Sweden. These are tough times in terms of funding for education. So the insights about constraining and enabling practice architectures for school development and action research presented in this chapter will likely resonate with changing conditions experienced in other Swedish schools, and perhaps in other national contexts.

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Chapter 10
Leading as a Socially Just Practice: Examining Educational Leading Through a Practice Lens

Jane Wilkinson

Abstract Educational leadership scholarship has typically focused on the practices of individuals or the interconnections between individuals in a practice. Critics of these approaches argue that they overlook questions of power, politics, and the cultural specificity of sites of practice. This chapter responds to these criticisms by proffering an alternative approach to educational leadership scholarship. Drawing on a case study of a previously monocultural school which had become increasingly multicultural, it employs a practice theory lens through which to examine attempts by the school executive to enact leadership as a socially just practice. In particular, it examines how the school executive challenged specific arrangements in order to bring into being changes in the intersubjective spaces in which leaders, teachers, and (Anglophone and ethnically diverse) students encountered one another. This endeavour is revealed as contested, contradictory, and only partially successful.

In this chapter I argue that bringing into being more sustainable and socially just leading and teaching practices requires theorising classrooms, staffrooms, playgrounds and schools more broadly as sites of practice. Examining and interrogating the nexus of arrangements – language and specialised discourses, activities and material arrangements, and relationships of solidarity and power – which hold socially unjust practices in place is a first step in this process. Bringing into being more socially just practices also necessitates a focus on the ecological interconnections between leading as a practice, and the related practices of enacting policy, professional learning, researching and reflecting, and students' learning practices. On the basis of an ecological understanding of the interrelationships between practices, the practice knowledge of individual teachers and formal leaders may be challenged and transformed. It is in this challenging and transforming that the broader educative purpose of leading as socially just practice and praxis may be realised.

Leading practices – be they formal or informal, school, district or central office based – both shape and are shaped by, transform and are transformed by, the site-specific arrangements with which they are enmeshed. Leading *as a socially just*

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practice is composed of a set of practical and political actions, i.e., actions which cannot be foretold or steered at a distance by central policies, implementation plans, or accountability mechanisms. Leading practices are struggled over, hard-won, constantly contested, and must be interactionally secured in the moment-by-moment 'happening-ness' of practices within specific sites (Kemmis et al. 2014; Schatzki 2002).

In this chapter, I examine this struggle through the lens of leading practices at Regional High School,[1] a largely monocultural secondary school which had become increasingly multicultural due to the arrival of refugee origin students from Sudan, Sierra Leone, and Liberia. In this respect, Regional High School was part of a broader trend of growing ethnic diversity in urban and regional locations in OECD nations (cf. Major et al. 2013; Makwarimba et al. 2013; Whiteman 2005). In particular, I examine how changes in the cultural-discursive, material-economic, and social-political conditions for leading and professional learning practices at the school fostered the emergence of transformed sets of discourses, activities, and relationships. These changes suggested that some educators and students were experiencing a growing sense of shared responsibility for socially just practices.

Importantly, these changes did not occur in isolation from the broader practice landscape in which the school was embedded. For instance, leading practices within the lifeworld of the school site 'travelled' out to, and connected up with, regional and state offices of the Department of Education responsible for schools in the state (Wilkinson et al. 2013b). They connected to discourses emanating from specific departmental equity and anti-racist policies, through specific funding and resourcing arrangements linked to these policies, and in the relationships between practices that were shaped by these discursive and material arrangements. These arrangements supported more receptive conditions for fostering socially just and inclusive educational practices in the school.

In examining these transformations in practices, I adopt the verb, 'leading', rather than the noun, 'leadership', in order to draw attention to the dynamic nature of leading as a 'practice-changing practice' (Wilkinson and Kemmis 2015) which is "exercised and transacted" (Southworth 2008, p. iii). This is in contrast to much educational leadership scholarship, which, despite adopting the rhetoric of distributed and/or shared leadership, still tends towards a notion of leadership as a static condition unproblematically invested in formal authority roles such as the principalship (Kemmis et al. 2014; Wilkinson et al. 2013b). In using this term, I seek to deliberately trouble educational leadership research which has tended to view leading practices through the prism of charismatic *individuals*, or as *role incumbents* in organisations such as principals or managers (cf. Wilkinson and Kemmis 2015). Using the term 'leading' focuses attention on the ontological nature of leading as a practice. It draws the gaze to the *connections between practices* of leading and other related practices, such as enacting policy (Braun et al. 2010), professional learning, teaching, and students' learning enacted in specific sites. This is in contrast to theories such as distributed leadership, which focus on how

[1] All names are pseudonyms.

participants in a practice (e.g., leaders, teachers, students, central office, and district staff) connect up together (Wilkinson and Kemmis 2015). Foregrounding practices, rather than the participants in a practice, does not dismiss the role of personal agency. Rather, it highlights the critical role that specific sites play in enabling and shaping the conditions for changing practices (Wilkinson and Kemmis 2015).

Furthermore, I distinguish between the positional leading practices of those participants who hold formal positions of authority – such as the Principal and Deputy Principal of Regional High School, Regional District's Equity Officer, and Regional Director – and the informal leading practices of everyday practitioners at Regional High School, such as its counsellors, English as an Additional Language or Dialect [EALD] teachers, and School Support Officers (Ethnic).[2] In making these distinctions, I draw on Northern European pedagogical understandings of leading practice as a shared responsibility – in the more holistic sense of the moral and social formation of the whole child – i.e., 'education as up-bringing' (Kemmis and Grootenboer 2008).

In the remainder of the chapter, I first sketch the case study and its methods. I then examine the cultural-discursive, material-economic, and social-political conditions at Regional High School and its District Office, which were conducive for the carriage of practices of shared responsibility for social justice. Specifically, I examine how the leading practices of the school, district and central office, along with other educational practices such as enacting policy and professional learning, connected up in ways that supported the creation of these conditions of receptivity. I also sketch disconnections between leading practices and other crucial sites of practice – teaching and students' academic learning – which hindered a greater movement of shared responsibility for socially just practices. I conclude with a discussion of the theoretical and practical utility – as well as limitations – of the concepts of practice architectures (cf. Kemmis and Grootenboer 2008; Mahon et al. 2017, Chapter 1, this volume) and ecologies of practices (cf. Kemmis et al. 2012a) when it comes to examining leading practices as sites of and for social justice.

Negotiating Institutional Practice Architectures in Turbulent Times: The Case of Regional High School

In 2004, in response to declining populations and labour market shortages in regional Australia, the Australian Federal Government enacted a change to refugee policy, declaring that up to 45 % of all humanitarian settlers should be located in the regions (Withers and Powall 2003). As a result, the previously monocultural face of a number of regional centres began to alter. Settlers who were 'visibly different' from the largely white population arrived and took up residence in local communities, shopping, attending schools, worshipping in churches, participating in sport and

[2] The title 'School Support Officer (Ethnic)' was the formal title employed by the Department of Education and Training at the time this study was conducted. Hence, I have elected to use this title.

attending schools and community colleges. For instance, between 2003 and 2011, humanitarian entrants from a variety of African nations were settled in significant numbers in New South Wales, the state in which our case study was located. The figures for primary settlement of African origin refugees at the time of the study included a total of 1505 refugees distributed amongst four regional cities in New South Wales. In terms of Sudanese-born people (the group which were predominantly represented amongst the students in the case study school) the 2006 census recorded 19,050 Sudan-born people in Australia, an increase of 287.7 % from the 2001 census (Department of Immigration and Citizenship [DIAC] 2011).

Yet, despite this changing demographic for Regional High School and other similar public schools located in regional settings, little research has been specifically conducted on the implications for *educational practices* (teachers, administrators, district staff, and students) of this shift in previously more monocultural locations. This is even though access to services, as well as knowledge and expertise about EALD students, is limited in regional and rural Australia, with the exception of a handful of culturally diverse regional locations. Hence, the case study of Regional High School, *Examining school leadership and pedagogical practices in an ethnically diverse school in regional New South Wales* attempted to fill this gap. It examined the shifts which may have occurred in the leadership and teaching practices of the school in response to increasing student diversity (cf. Wilkinson and Langat 2012; Wilkinson et al. 2013a).

The case study was conducted from 2009 to 2010 and consisted of interviews with the Principal and two Deputy Principals; Careers Counsellor; Maths Head Teacher; EALD Head Teacher; School Support Officer (Ethnic); and the region's Equity Coordinator. Two focus groups were also held with mainstream classroom teachers from the following faculties: Technology and Applied Studies [TAS], Physical Education, Mathematics, English/History, Science, and Visual Art. Focus groups were also conducted with the school's two welfare counsellors; the EALD teachers; two focus groups with EALD students; and a focus group with students from ethnic majority backgrounds.

Analysis was initially conducted through the use of NVIVO software in order to code, categorise and link ideas, and accurately annotate each transcript. Three themes emerged from this analysis: (1) the challenges for EALD students and educators when it came to students settling into a previously monocultural school; (2) the development of whole school practices for social justice and inclusion; and (3) the role of teaching practices in enabling and/or constraining students' ethnic diversity. This chapter will focus on the second of these themes.

Developing Whole School Practices of/for Social Justice and Inclusion

For Regional High School, increasing numbers of EALD students, and, in particular, those from refugee backgrounds from a variety of African countries, posed a number of significant challenges and opportunities for administrators, teachers, and students

(both of refugee origin and non-refugee origin). Although these issues may be familiar to many schools in urban environments, they were new to the region. In the past, a small number of EALD students came to Regional High School, including refugees from the former Yugoslavia and Iran, but the larger numbers and increased learning and behavioural complexities associated with this new group of EALD students from diverse African nations, posed new issues with which the school initially struggled.

Specifically, a number of students were not literate in their first language and, due to civil war and long periods of time in refugee camps, had either interrupted or no schooling, prior to arrival in Australia. The cultural-discursive conditions of learning and teaching practices in Australian classrooms are still largely predicated on the discourse of the literate learner, i.e., constructs of the Anglo-Australian student who has had years of continuous formal schooling based on engagement with written texts. In contrast, many of the students were illiterate in their first language, but came from backgrounds where oracy and narrative were valued forms of cultural capital. Hence, many of the teachers struggled to shift from a deficit view of the students as learners, to an asset approach which focussed on the multilingual and oracy strengths this new cohort of students brought to the classroom (Wilkinson and Langat 2012).

Moreover, a number of the students suffered from a range of traumas as a result of their experiences living in high conflict zones prior to arrival in Australia. The combination of these major literacy demands, lack of familiarity with formal school settings, along with high levels of personal trauma, created a new set of circumstances in regard to EALD students. The most urgent need identified as a result of this new cohort of students was in terms of material-economic arrangements to support their language learning, for instance, creating an intensive English class, rather than students immediately being located in mainstream classes with very little extra support. Funding for EALD teaching in Australia is based purely on numbers of students. As urban centres tend to attract far greater numbers of students of refugee origin, the region did not have an Intensive English Language Centre into which students could be placed in order to cater for their specific learning demands.

Other pressing needs in terms of material-economic arrangements that both teacher focus groups and the executive team identified were: developing a more positive and reflexive welfare system which was proactive, rather than reactive; and providing professional learning activities which would support mainstream teachers catering academically and socially for the diverse range of learners in their classrooms (Wilkinson and Langat 2012). However, both the school's executive team and the teachers identified one of the most urgent projects of their practices in terms of social-political arrangements, i.e., nurturing a socially inclusive culture that would welcome this new group of students in a positive, affirming, and ongoing way.

Both the Principal and the Deputy Principal responsible for students of refugee origin articulated this *telos* or aim as a major project of the school, i.e., that it was an inclusive school which welcomed and catered for students of a wide range of abilities, skills, and backgrounds, including Indigenous students, Gifted and

Talented students, and students with intellectual and physical disabilities. This telos appeared to create a niche, i.e., a more hospitable set of practice conditions with which to receive students of refugee origin (Kemmis et al. 2012b, December), in that the language and activities of the school executive were framed in terms of the opportunities provided by the students' arrival, rather than as 'problems' to be solved. Critically, both members of the executive team recognised early on that nurturing such a culture in their previously monocultural school would require not only changes to material-economic arrangements such as extra EALD resources and upskilling of all staff, but changes to how staff *thought* about diversity; and shifts in *relatings* between staff and students, and between students and students. I will now examine these shifts in the practice conditions of the school and the kinds of practice architectures which enabled these changes, both in the school and Regional Office.

Transformations in Arrangements of/for Socially Just and Inclusive Practices at Regional High School

Both the Principal and the Deputy Principal responsible for the welfare of students of refugee background recognised the power of discourses such as 'African' to frame students as 'other' and subaltern to a taken-for-granted, Anglo-Australian mainstream student. The Principal engaged in a range of formal and informal practices to influence the language of staff in relation to students. These included raising staff awareness of the deleterious material effects of homogenising and essentialising students of refugee background as 'African', thus flattening out the rich cultural, linguistic, and historical diversity between the students' nations. He commented:

> There's a huge diversity in the kids we're getting … we had to avoid or try … to discourage people … in conversation or at meetings … from saying things like you know the African kids do this or the African kids think this way… You can't simply lump them all under the one group … we had quite a number of people from the Sudan, I mean their literacy background will depend very much on which way they got out of the country. If they went through Egypt and were in camps in Egypt then they come from an Arabic background as well as their own Indigenous language or languages, you know in some cases.
>
> Whereas the children of families who have come by Uganda – what little schooling they had was done in English, so their English, their initial competence in English is somewhat better.
>
> But, and that was another thing that we had to get the staff to realise … what it was like in their country and what their experiences were, and also their … own relationship with their country … with the colonial background of their country, so there's a whole range of issues.

In order to challenge this kind of essentialising discourse, the executive team ran a number of awareness-raising activities at staff meetings, led by various educators including the Deputy Principal and the School Support Officer (Ethnic). The Deputy Principal described one such session:

> We ran a session just on information about Sudan … just explaining to people that you know Sudan is a huge nation, nine borders, different population, this is the nature of the kids, this is the education system they would have come from, these are the cultural expectations so there was a whole lot of information that was provided …
>
> It broke down one of the really critical things that teachers here needed to start thinking about and that was: 1. If you are from Africa, Africa is a continent; it's not a country. 2: that the cultures in Africa are as complex – if not more so than say in Europe – and that somebody from the Sudan is as different from somebody from Sierra Leone as say somebody from Germany might be from somebody from England … we're talking about … twice the area and all of those sorts of things.
>
> Even well-educated Australians such as teachers are not necessarily [used] to working with different cultures … at least half [the teachers] are country people … and so their own experiences of different ethnic groups needed a little bit of massaging.

The preceding sayings and doings (cf. Kemmis and Grootenboer 2008; Mahon et al. 2017, Chapter 1, this volume) of the Principal and Deputy Principal are in contrast to the actions of many school leaders who frequently may be '"colour-blind"' in their approach (Santamaria and Santamaria 2015, p. 24). Principals may leave the onus of responsibility for raising awareness of cultural responsiveness to EALD teachers or individual staff. Further, the executive team's responses suggest that both individuals possessed a critically conscious habitus, i.e., a "heightened and critical awareness of oppression, exclusion, and marginalization" (Brooks 2012, p. 23). For instance, the Deputy Principal spoke passionately about his abhorrence of racism and his despair at the racism he perceived in the school when the first family of students from Sudan arrived. He described his reaction thus:

> Back in the early 2000's there were a couple of kids who were from a … family who seriously I would suggest Mum would have been a clan leader if we were living in the States … They were just disposing the most appallingly inappropriate racist comments when the first family, African family arrived … I was really distressed about it …
>
> I spoke to the school counsellors about ways forward and I decided I'd talk [at school assembly] … about the good old days … in Washington DC in the 1960's … The only African-Americans I ever saw were the ones that were working for white families in our street … racism was a way of life … when some of their parents were alive or just growing up and that's no longer acceptable. This is where I took a chance … and I asked them to stand up if they felt that racism was wrong and that we should fight against it.
>
> So even if they didn't want to stand up I think they would have been shamed into it … All but one person stood … the girl of the family that I was referring to, now they stayed in the school for another three months and left and I think it was because of the sort of pressure that was now being placed on them. So there was this turnaround [in racist attitudes amongst the students]. So if you talk about student leadership in a sense I would even argue that there were a number of students that would have taken a chance that day and said I'm going to stand up – this is wrong.

One way to conceptualise the preceding actions would be to read it through the lens of the heroic leader, turning around (at least temporarily) students' racism through consciousness-raising and peer pressure. However, the reason I cite this incident is not to fetishise the Deputy Principal's individual leadership *per se*. Instead I draw attention to the deliberate *orchestration* by the Principal and Deputy Principal of practices in order to change students and staff sayings, doings, and relatings in regard to students of refugee origin. These practices included policy enacting (e.g., changes to how anti-racism and welfare policies were enacted at the

school); professional learning (e.g., awareness-raising sessions amongst staff; challenging of stereotypical language) and students' learning (e.g., the Deputy-Principal's anti-racist actions at school assembly).

These practices connected up together to inform the overall school telos or project of leading, teaching, and learning in inclusive and socially just ways. In turn, these practices were enmeshed with and enabled by specific cultural-discursive arrangements brought into the site from regional and state office of the Department of Education, such as the NSW Education Department's anti-racism policy. They were enmeshed with particular material-economic arrangements. For instance, the statewide funding arrangements for EALD students were based on a critical mass of students at designated low levels of literacy. After much discussion, the public schools and regional education office came to an agreement that new arrival students of refugee origin would be enrolled in Regional High School only rather than sent to different schools in the town, thus garnering sufficient numbers and funding to create an intensive English class. These practices were enmeshed with specific social-political arrangements. For instance, the Principal and Deputy Principal donned aprons and cooked food at a welcome barbeque for students of refugee background, their Anglo-Australian friends, and their families in order to demonstrate their delight at welcoming these new students. Traditional hierarchical distances between students and large high school leadership teams were deliberately subverted through the democratising practices of the Principal and Deputy Principal and this had a significant effect on the relatings between students of refugee origin and the executive team. As one EALD teacher later remarked:

> the kids were astonished that … [the Principal] … and … [Deputy Principal] … came down and served the sausages. They were just astounded that the leader would be serving, little things in some ways but that spoke enormously to kids that they were valued, important and that someone in that position would actually serve sausages.

These leading practices were not singular actions, but indicative of a deeper, whole-school leadership project to growing a greater sense of responsibility for socially just practices of leading across all staff and students. One of the school counsellors summed these practices up thus:

> [The executive team demonstrate] … a willingness to support getting these kids included. And to me it starts at the top, if you have that kind of attitude at the top, and I believe it has trickled down … that's a very strong characteristic and not being afraid to model compassion either.

Transformations in Arrangements of/for Socially Just and Inclusive Practices at Regional Education Office

The sayings, doings, and relatings of the school executive team were also nested in broader discourses, activities, and relationships of leading practices for social justice travelling from regional and central office sites. These interconnected

practices evolved and travelled over space and time and, given the right conditions, 'hung together' in Regional High School to create a distinctive educational project focussed on leading for more socially just practices (Schatzki 2002; Wilkinson and Langat 2012; Wilkinson et al. 2013a). For instance, at the time of the study, the NSW Department of Education and Training [DET] had a series of policies specifically framed around equity, inclusion, and citizenship (including anti-racism, cultural diversity, and community relations, and implementation guides for teaching EALD). The importance of these policies and their accompanying implementation plans was that they provided significant material-economic resources to schools such as Regional High School, signalled that socially just practices of educating were paramount, and discursively signified to schools that students of refugee origin 'counted' in NSW public education (Niesche and Keddie 2012). As the region's Equity Coordinator remarked:

> I certainly know that my role is the practical side of the coin, that if I'm not driving that, then it's not necessarily going to happen. You might get a school leader who does it intuitively, but it's very definitely something where the DET policy is the driver.

The existence of such policies and plans is crucial, as the Coordinator notes. Recent moves to greater school autonomy in states such as Queensland suggest that removal of targeted funding for equity groups can lead to marginalisation of equity considerations when individual principals overlook or are ignorant of the specific needs of students of refugee background (Keddie 2015).

For instance, the New South Wales DET policy, *Cultural Diversity and Community Relations Policy*: *Multicultural Education in Schools* stated in Objective 1.5 that "schools will provide specific teaching and learning programs to support … students from culturally and linguistically diverse backgrounds" (Department of Education and Training 2010). It was compulsory for schools to develop their own anti-racism policies, appoint an anti-racism officer who underwent regional training, and schools which received funding for EALD support were held accountable for ensuring the money was spent directly on this area rather than on more general initiatives (E. Brace, pers. comm., 27.02.15). Each regional office had an Equity Portfolio with consultants whose brief it was to provide training and support for schools and staff who worked with students of refugee origin. Hence, these policies did not operate only at an espoused level but functioned as policies-in-use, i.e., with specific resources, funding, and accountability mechanisms tied to them (Walker 2004).

The significance of these material-economic arrangements in enabling (although not guaranteeing) more socially just and inclusive practices at Regional High School was outlined by the region's Equity Coordinator:

> At a state level there is an EALD consultant who has responsibility for rural and regional NSW … I have someone obviously, with expertise who I liaise with quite regularly … As well as that … they have created positions that their title is EALD Teacher Mentor. They've been a huge benefit to our region. They are trained EALD teachers, who … work directly with the teacher who is responsible for the EALD new arrivals program … An example, we have a family arriving … and there will be three children … it will increase the amount of time that they're entitled to, and that's for twelve months … the EALD teacher mentor will

> make immediate contact with the teacher who is allocated, and make sure that they have the professional support that they require …

There is a major difference, however, between policies-in-use and the lifeworld of regional offices, schools, and their leading practices of/for social justice and inclusion. At the time of the study, the NSW Education Department was composed of a 'top-down', bureaucratic and highly centralised set of social-political arrangements that prefigured relatings between central and district office on the one hand, and Regional High School on the other hand. However, there was evidence of more democratic, collaborative, and consultative practices of leading for/of social justice emanating from the Regional Office that connected up with more socially just and inclusive practices of leading in the school. The region's Equity Coordinator described these practices as follows:

> [T]he only way that the EALD teacher mentor would work with those teachers is that we have established EALD information networks, so that regularly, each term in our designated EALD areas, there are EALD information network meetings … All of the EALD teachers come together at those meetings, and they are generally coordinated by the EALD teacher mentor, and it's a shared agenda, so the teachers have a say into the agenda and there's a lot of professional sharing and professional learning that occurs at those meetings …
>
> Since I've been coordinator we've made sure that that was a very coordinated process … it's very strong; there's a very strong network and they're also very committed and dedicated teachers.

These more collaborative practices appeared to be the hallmark of equity initiatives in the region. Such practices were in turn prefigured and enabled by the distinctive nature of the site in which Regional High School was located. That is, as a regional town, there were shared understandings, activities, and relatings amongst educators and agencies about the realities and vicissitudes of working in a non-urban locale where scarcity of government funds and lack of trained personnel prefigured relations of solidarity between agencies, when it came to best meeting the interests and needs of families and students. However, though there may be more conducive conditions for practices of solidarity in regional settings, these cannot be presupposed or taken-for-granted. Rather, they needed to be advocated for and struggled over in order to be realised.

For instance, the region's Equity Coordinator described how when the first group of families from Sudan and other African nations arrived, the town and education agencies were unprepared and thrown off balance. However, drawing on the partnerships and collaborative practices which Regional Office personnel had built between intergovernmental agencies and non-government agencies responsible for refugee settlement, a more hospitable niche was fashioned in which students and their families could be welcomed and integrated in the local schools. The Equity Coordinator described the creation of these more socially just conditions of practice as follows:

> And our schools at the time – it probably was confronting for them because these students arrived with backgrounds that were totally unfamiliar – totally unfamiliar – we were ill-prepared, not just as a school system but as a community in terms of the needs that they had. In some ways we were fortunate that the enrolments tended to be at two schools [Regional

> High School and one of its feeder primary schools?]. [T]hat was by design, as much by chance, because we realised that it would be far better to have a concentration of those students in two schools, because with a concentration of students comes additional resourcing, rather than having them scattered …
>
> And I'm pleased to say that our schools took that on board very positively, and they could see too that whilst initially, it was probably going to be a huge learning curve for them, that it was certainly in the best interests of the students, in particular and their families …
>
> And I guess the whole nature of the ability to support schools has been very much strengthened by our experiences in [Regional High School Town]. So, as a region we've been much better prepared; you know what to expect, you actually know what resources a school needs, you know how to prepare the school and provide the support, almost before the students arrive. And that's very much a model that I use now … And again, that comes through developing your partnerships with different inter-agencies and groups who have that responsibility. So, now, with the Multicultural Council, they will let me – I have a lot of warning, as to when a new family is arriving.

These increasingly collaborative practices were underpinned by the shared goal of the region's Equity Coordinator and the Regional Office's Director when it came to prioritising equity initiatives in the region. Like the Principal and Deputy Principal of Regional High School, these formal leaders appeared to have made the decision to "race themselves outside of Whiteness and work to benefit systematically underserved learners" (Santamaria and Santamaria 2015, p. 30). The Equity Coordinator observed:

> So, I think that my role is critical, so that if I were not as proactive as I am, I think the level of the support we can give to schools could be negligible. But because I see it as very important and because [the Regional Director] knows that it's very important that, as far as the region goes, we've put it as a high priority. Because I mean, I've been there, I've seen – and that's one of the reasons that you take on these roles, you want to support teachers.
>
> So, whilst you understand that obviously, the focus of our support is for the students, we're in these roles because we realise the students aren't going to achieve, unless the teachers and schools are well supported.

The more consultative and inclusive practices of relating at Regional Office level connected up to and with, attempts to build more democratic leading practices of/for social justice at Regional High School. These practices included a range of doings including school executive designating two positions on the Student Representative Council [SRC] for students of refugee origin, in order to ensure greater visibility in a positive sense and build students' leadership skills. It also included running a series of focus groups with Learning Support Officers (Ethnic) and key members of the refugee community in order to discuss the key issues for students of refugee origin arriving at the school. These focus groups resulted in changes to practices in the school – such as transforming the welfare system to focus on positive rewards as opposed to a previously more punitive approach. As one of the school's counsellors observed:

> We've had a series of focus group discussions with key members from the African community to talk about what the kids are experiencing and what can we do as a school. Because I remember being at … meetings at such level and that was when we were having a lot of conflict with kids getting settled and teachers understanding kids … Kids would …

> arrive in Australia on Monday and they're in school on Wednesday. And with very little orientation and feeling lost and confused and unsettled.
>
> … There were different people from the multicultural community … support people … churches or organisations that sponsor them … mentors and Learning Support Officers (Ethnic) …
>
> Our welfare policies have changed … we offer a lot more positive reinforcement to students and encouraging them to achieve, like Honours Award and Principals Award, there's been a lot of prestige attached to students striving for these …

These consultative practices are bundled together with what Santamaria and Santamaria have termed "Applied Critical Leadership" [ACL] practices (2015, p. 28). These practices included, for instance, a willingness to "initiate and engage in critical conversations" with staff about the racist implications of their language; and the Deputy Principal's actions in "leading by example to meet the unresolved challenges" (Santamaria and Santamaria 2015, p. 28) of racism within the school. The practices in turn fostered and rendered visible previously hidden and more informal leading practices, i.e., forms of leadership practice devoid of managerial authority. For instance, EALD teachers at Regional High School often taught their students' parents at the local Technical and Further Education (TAFE) college, bumped into these families in the supermarket and assumed the role of cultural mediators and advocates, taking students to after-school sport and advocating on their behalf to other teachers and the executive team (Wilkinson and Langat 2012). They were a critical source of expertise and support in the executive team and teachers' professional development. Their intercultural knowledge meant they played a key brokering role at Regional High School between home, family, and school (Matthews 2008). Rather than the reported hostility, which characterises relatings between mainstream teachers and EALD staff in urban schools (Major 2006), Regional High School staff were highly appreciative of the EALD teachers' skills and intimate knowledge of the students. Moreover, there was evidence that informal professional learning was occurring as a result of some teachers learning new teaching practices through working with EALD staff. Thus traditional hierarchies of power were subverted between the secondary subject teachers as 'experts' and EALD teachers as 'helpmates', serving teachers. For example, a mainstream teacher noted how she would voluntarily ask the EALD teacher's advice, remarking:

> I might say to … [the EALD teacher] … I want to do this … what's the best way to approach this? … I've written very explicit … instructions how to do these certain things and with both of us there … hopefully we can try and get them to achieve things or you give them things to model off.

Leading as a Socially Just Practice: A Contested Practice

Leading as a practice needs to be situated in ecologies of practices that have a "common commitment to an overall project of education development" rather than "the command and control view of leading which seems … to underlie many

programs of school improvement around the world – and which may often take a technical and managerialist view of the process of educational change" (Kemmis et al. 2014, p. 176). In this chapter, I have attempted to capture this insight by focussing on the site-distinct particularities and 'messiness' of leadership practice as a previously monocultural secondary site wrestled with the unique opportunities and challenges faced in integrating a new and 'visibly different' student cohort. The issues faced by this venture cannot be assuaged by prescriptions, rule-following, or practice orientations to leadership which focus on it as a technical activity only. Rather, I have attempted to draw attention to how the creative problem-solving displayed in the leading practices of Regional High School staff (Principal, Deputy Principal, EALD staff) and Regional Office personnel was underpinned by a fundamental ethical, moral, and political commitment to education as a socially just form of practice. In other words, a praxis-oriented disposition informed their actions, suggesting that these were 'morally-informed' leading practices that were part of a "socially-critical practice tradition in education" (Kemmis et al. 2014, p. 177). Hence, one of the major contributions of a site ontological view of leading practice is that it foregrounds not only the inherent sociality of leading practices in the particularities of a site, but the profoundly moral and ethical situatedness and 'history-making' dimension of the day-to-day practices enacted in classrooms, staff meetings, and playgrounds. This is a contribution which more technicist-oriented interpretations of leadership ignore or downplay.

However, one of the critical components of leading praxis as 'history-making' action is that we cannot foresee its material consequences or implications. On the one hand, there was evidence that certain leading practices for social justice had had positive material impacts on some Regional High School staff and students' sayings – understandings and thinking – actions and relatings when it came to more socially just educational practices. On the other hand, there were suggestions of the limitations of current forms of leading practices as they were enacted at Regional High School. These limitations can be analysed in two ways: firstly, in terms of the practice architectures that continued to prefigure secondary traditions of pedagogical practice at Regional High School; and secondly, in terms of ecological *disconnections* between leading as a socially just practice and teaching practices.

Through a practice architectures lens, there was evidence that teaching practices had remained stable and resistant to the increasingly diverse learners in Regional High School classrooms (cf. Wilkinson and Langat 2012; Wilkinson et al. 2013a). As noted earlier, these teaching practices were prefigured by practice traditions in secondary schools in which largely Western bodies of knowledge (cultural-discursive arrangements) were organised in subject-specific disciplines (material-economic arrangements) prefigured on a normative assumption of the white, literate student who possessed the cultural capital of uninterrupted literacy learning that allowed them to learn from largely white teachers' practices (social-political arrangements). Despite laudable attempts to challenge teachers' discourses in relation to students of refugee origin, the practice architectures of teaching at Regional High School remained largely intact (for instance, staffrooms arranged in subject disciplines, discourses of the 'mainstream' learner, and corresponding

assumptions of the illiterate learner as deficit). In essence, as a 'traditional' Australian secondary public school, there was a different logic of practice operating in terms of its more hierarchical and discipline-based teaching and learning practices. This was a logic that is detrimental to not only students of refugee origin, but Indigenous and other students. It was a logic which the executive team's attempts did not challenge, despite their attempts to change practice architectures that constrained more socially just practices (Wilkinson et al. 2013a).

Focus groups with Regional High School teachers suggested that the sayings, doings, and relatings of their teaching focussed on an uncritical and unexamined privileging of the literate mainstream learner as opposed to students of refugee origin as the deficit 'other'. Yet, Regional High School was changing. The evidence from its classrooms suggested that the normative assumption of an ethnically and educationally homogenous cohort of students was no longer viable. As one teacher remarked:

> I just reckon it puts a lot of pressure … about three years ago, I had a Year Eight class and I had about six Sudanese in there but I also had about six major learning difficulties … I couldn't get anything done. I felt bad for the kids who knew how to read and write because you just spent so much time just with the basics and there was no support and I just thought that was ridiculous – that was allegedly a mainstream class.

In making this critique, I am not ignoring the very real pressures faced by educators in catering for the increasingly diverse learners in their classrooms, particularly in the face of insufficient material and economic support. Rather, what I am pointing to is the ecological disconnections between attempts to enact more socially just practices of leading and other forms of practice in the school, such as teaching. For instance, I have documented how particular leading practices undertaken by the executive team (as well as EALD and Learning Support Officers) clearly connected up to policy-enacting and professional learning practices in the lifeworld of the school in ways that suggested positive changes to staff practices of and for social justice. However, the preceding quotation suggested the limitations of professional learning practices which remain at the level of consciousness-raising alone. These practices did not equip teachers to teach in more pedagogically appropriate ways, nor did these sessions engage teachers in deeper forms of reflection upon their teaching practices, for instance, engaging in 'critical conversations' around challenging topics such as "race, language, culture, difference, access, and/or educational equity" (Santamaria and Santamaria 2015, p. 28). This is an aspect of leading as a socially just practice that appeared lacking at Regional High School and which might not have been much different from many other secondary schools in the state or nationally.

Initiating and engaging in difficult conversations such as examining the privilege that whiteness bestows upon one's practice is an important characteristic of applied critical leadership (Santamaria and Santamaria 2015, p. 28). I do not wish to take away from the significance of what was achieved at Regional High School. However, the fundamental lack of change in teaching practices does reveal the limitations of

leading practices in which social justice remains something that is 'done' for or to the 'other', rather than critiquing how one's own privilege (e.g., as a male, as white, as literate, as middle class) may be holding in place the very practice architectures that one is attempting to challenge. Furthermore, if constructions of the white, 'mainstream' learner remain at the centre of teaching practices, then one might well ask, how much that mattered had genuinely changed in the school? This is a valid question. However, what it overlooks is that there is more to schooling and educational change than formal classroom practices alone – an insight which the executive team recognised and which I have attempted to outline in this chapter.

Conclusion: Towards Researching as a Socially Just Practice – Implications for Future Research

The theory of practice architectures foregrounds the social and political nature of attempts to enact leading as a socially just practice. One of the clear contributions that the theories of practice architectures and ecologies of practices can make to leading as a socially just practice is to, firstly, foreground and render visible the inherently *political* nature of leading, i.e., as a practice that is enmeshed in the culture, discourses, and material and economic arrangements that prefigure educational practices. This is a critical point, for too often mainstream analyses depoliticise and neuter the power relations inherent in educational leadership practice, despite acknowledging that positional leading operates as a practice-changing practice (cf. Kemmis et al. 2014; Wilkinson 2008).

Secondly, the theories provide a set of conceptual tools for empirically tracing connections and disconnections between leading as a socially just set of practices and other educational practices such as enacting policy and professional learning, in ways that can reveal the gaps and inconsistencies that may lead to potentially deleterious teaching and learning practices. Thirdly, the theory of ecologies of practices in particular draws attention to the inherently *relational* nature of leading practices as a process of "interpersonal and mutual influence that is ultimately embedded within a collective" (DeRue and Ashford 2010, p. 629). However, ecologies of practices and a site ontological view of leading practices suggest that rather than 'mutual and interpersonal influences' within a collective of participants, it is the connections or lack of connections between practices as part of a larger Education Complex of practices (cf. Kemmis and Grootenboer 2008; Mahon et al. 2017, Chapter 1, this volume) that are critical to examine.

In my analysis, I have attempted to highlight that leading as a socially just practice, and socially just (and unjust) educational practices more broadly are not tangential concerns for those of us engaging with the theory of practice architectures. Rather, they are fundamental to questions of how new intersubjective arrangements and ways of being, doing, and relating in the world can be shaped in ways that

support the aim of building a world worth living in. Moreover, I have attempted to render visible how the social-political conditions shaping sets of leading practices are intrinsically enmeshed with and 'bleed into' the culturally-discursive and material-economic arrangements of schools and related sites. This is not a new insight and is indeed one that has been stressed throughout the ongoing development of the theory of practice architectures (cf. Kemmis and Grootenboer 2008; Kemmis et al. 2014). However, I raise the point as anecdotally my research experience has been that although we may separate out cultural-discursive, material-economic, and social-political arrangements in our analysis, the broader challenge remains how to analyse educational practices (and the conditions that shape them) in ways that recognise how they are 'bundled together' (Schatzki 2002), while simultaneously holding each up to the light of critical analysis. In this sense, a fruitful area for enquiry may be to examine the kinds of sense-making practices that we engage with as researchers when analysing data using these theories as our key lenses (cf. Pennanen et al. 2017, Chapter 12, this volume).

Finally, I suggest that researching of and for morally-informed educational practice and praxis should, by its very nature, entail a range of socially just researcher practices, including reflexively examining the practice traditions and histories that we bring to our practices of researching and analysis. This would entail engaging in critical conversations about how these traditions may influence our ways of working with and interrogating – or failing to interrogate – aspects of the data, i.e., in terms of the kinds of questions we may or may not ask about practices. For instance, as a critical feminist scholar, my doctoral training in Bourdieuian analyses of field, capital, and habitus shaped my disposition to ask questions of the Regional High School study in regard to not only existing sayings, doings, and relatings, but also the 'raced' nature of silences; for example, how particular teaching practices positioned refugee youth as other to a mainstream (white, Anglo-Australian) learner. It trained my gaze on how particular leading practices of and for social justice may be prefigured by gendered, 'raced', or classed social-political arrangements that render as illegitimate, assets Sudanese students bring to their learning, such as their oral capacity. Moreover, I am acutely aware that there may well be other questions or areas of leading as a socially just practice that I have failed to engage with as part of this analytical process. Given the strength and vigour of practice architectures as an emerging theory in educational practice, future research may profitably engage in conversation with other, related theoretical lenses such as critical feminism or practice theories such as that of Bourdieu's, as part of our research commitment to stimulating "new beginnings for education in and against an era of schooling" (Kemmis et al. 2014, p. 22).

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Chapter 11
Provoking Praxis Amidst a Faculty Restructure: A Practice Architecture Perspective

Kathleen Mahon and Letitia Galloway

Abstract It is argued in this chapter that critical pedagogical praxis is a kind of social-justice oriented, critically reflexive, and informed teaching practice that is needed in universities in these times of complexity and rapid change. However, critical pedagogical praxis can sometimes be difficult to enact amidst pressures associated with mass education, changing community expectations, and the influences of neoliberalism and managerialism; pressures that are being experienced in educational institutions world-wide. This chapter discusses how the theory of practice architectures can shed light on some of the challenges of enacting critical pedagogical praxis in higher education. In the discussion, we draw primarily on a doctoral research project which examined enabling and constraining conditions for critical pedagogical praxis within a particular Australian university through the lens of practice architectures and other practice theories. We explore some of the salient architectures that were identified in the research, focussing our discussion on possibilities for enacting critical pedagogical praxis in the context of a faculty restructure. Ways in which academics were able to negotiate the changing conditions and create enabling architectures are discussed in the analysis.

Universities fulfil important (overlapping) functions in contemporary society. Among these are cultural (Habermas 1989), knowledge-related (Nixon 2011), civic (Giroux 2010), economic (Bleiklie 1998), and profession-preparing (Calhoun 2006) functions. Fulfilling these functions depends on appropriate higher education pedagogies realised through the pedagogical practice of university academics. A kind of pedagogical practice that we believe is particularly crucial for our complex times is critical pedagogical praxis, i.e., "reflexive, informed and morally committed

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pedagogical practice that seeks to create spaces (e.g., through teaching and learning interactions[1]) in which harmful or unsustainable practices and power relationships can be understood and reoriented, and in which new possibilities for action can emerge and be enacted" (Mahon 2014, p. 4).

Yet, the enactment of critical pedagogical praxis in the contemporary university can sometimes be difficult, partly because of pressures associated with the influences of neoliberalism and managerialism. Neoliberalism, a theory of political economic practices foregrounding market-based values and ideals in social relations (Ball 2012; Brown 2003; Davies and Bansel 2007; Giroux 2010) proposes that "human well-being can best be advanced by the maximisation of entrepreneurial freedoms within an institutional framework" (Harvey 2007, p. 22). Managerialism, on a slightly different note, is an ideology that claims that "efficient management can solve any problem ... and that practices which are appropriate for the conduct of private sector enterprises can also be applied to the public sector" (Rees, 1995, as cited in Sachs 2001). In recent decades, both have been felt in universities, as in other educational institutions, in the form of accountability pressures (Wilkinson et al. 2010), work intensification (Davies and Bansel, 2005), "the marketisation of higher education" (Marginson 2004, p. 204), constant restructuring (or "institutional churn" – Tight 2013, p. 11), and increasing casualisation (Courtney 2013), all of which have been slowly rendering particular kinds of pedagogical practice more or less legitimate, more or less valued, and more or less challenging, than others.

Our aim in this chapter is to show how the theory of practice architectures can illuminate some of the difficulties of enacting critical pedagogical praxis in the face of such challenges, and can generate insights that create possibilities for critical pedagogical praxis. To this end, we discuss salient practice architectures for critical pedagogical praxis that were explored in a doctoral research project conducted by one of the authors, Kathleen (Mahon 2014), and that have been the subject of the ongoing scholarly work of both authors. We focus our discussion particularly on the nature and consequences of a departmental merger, a common phenomenon in the contemporary university. Drawing on empirical analysis conducted as part of the doctoral inquiry, we highlight how the enactment of critical pedagogical praxis can be made more difficult when conditions are not ideal, as well as how it can be nurtured and provoked.

The chapter unfolds in four parts. First we introduce the doctoral research project upon which much of our discussion is based, explaining the nature of the project, key analytical processes, and how the theory of practice architectures informed the analysis. Second, we present a brief summary of some of the key findings of that research regarding the nature of critical pedagogical praxis and conditions of possibility for its enactment. Third, we turn our attention to a departmental merger which occurred in the setting where the doctoral inquiry was conducted. We tell the story of the merger, a story that is familiar to both of us, unpacking the events and their impacts in light of the theory of practice architectures and relevant merger lit-

[1] Not confined to teaching and learning that happens in classrooms, or between teachers and students.

erature. In the final part of the chapter, we point to the ways in which university educators affected by the merger were able to negotiate and respond to the changing architectures in positive ways. We consider implications for provoking critical pedagogical praxis and transforming practice and education as part of this discussion. The chapter concludes with a reflection on the affordances of the theory of practice architectures for writing about practices and the conditions for practice.

An Inquiry into Praxis

Kathleen's doctoral fieldwork, conducted over approximately 18 months, was a collaborative inquiry into possibilities and challenges for enacting and nurturing critical pedagogical praxis in higher education. Specifically, the research investigated how a group of university educators' efforts to enact and nurture critical pedagogical praxis (individually and collectively) within a particular university setting were constrained and enabled, and how these educators negotiated tensions between existing conditions and their praxis-oriented goals (Mahon 2014). Findings were drawn mainly from analysis of scholarly conversations between the seven university educators (including Kathleen) who were members of the group; interviews with group members and two of their colleagues; observations of group members' teaching practice (two workshops, several face to face student-lecturer/PhD candidate-supervisor meetings, an on-line forum session); and reflective writing.[2] The reflective writing was done by Kathleen with the aid of a journal as part of a self-study into her own practice as a lecturer at the time.

Analysis of the empirical material was conducted in the tradition of critical hermeneutics (Kogler 1996). It involved a range of processes and layers, and was approached in a flexible and iterative way. Some of the processes involved

- creation of field notes;
- journaling and journal analysis;
- transcript preparation, checking, read-throughs and annotation, coding;
- creation of diagrams and maps;
- the writing of summaries and narratives; and
- use of a 'Practice Architectures Template' (explained below).

The theory of practice architectures, in combination with Schatzki's (2002) "site ontology" (p. 138) and MacIntyre's (1981) ideas about relationships between practices, traditions, institutions, and "the narrative unity of a human life" (p. 240),

[2] Note that our discussion in this chapter draws heavily on findings from the study, but it was also informed by our own experiences of, and scholarship around, mergers, and Letitia's investigation into the changes happening at the university at the time as part of her doctoral studies. In order to satisfy ethical requirements associated with this project, in drafting the chapter, only Kathleen was privy to the primary empirical material (i.e., the 'raw data') generated in the project, and all empirical material used was anonymised.

Table 11.1 Analytical questions informed by the theory of practice architectures

Theory of practice architectures – Key conceptual tools	Key analytical questions
Sayings and doings (from Schatzki 2002)	What are educators saying (and thinking) and doing in the pedagogical encounters? What sayings and doings are specific to critical pedagogical praxis?
Relatings	How are educators relating (with whom and with what)? What ways of relating are characteristic of critical pedagogical praxis? What roles do power and agency play in what educators are doing?
Project(s) of a practice	What is motivating educators in their practice? What are the ends of the practice?
Practice architectures (cultural-discursive, material-economic, social-political arrangements)	What cultural-discursive, material-economic, social-political arrangements specifically enable and constrain the enactment of critical pedagogical praxis? What is holding the practice architectures in place? What is the role of human agency in constructing the practice architectures?
Niche; conditions of possibility	Are the sites of pedagogical practice a niche for critical pedagogical praxis? If not, what are they a niche for? What conditions of possibility make a site a niche for critical pedagogical praxis?

Note. This table is an excerpt from Mahon (2014, pp. 80–81)

provided a useful set of lenses for the analysis. In this discussion, we mainly focus on insights generated through the use of the theory of practice architectures.

The theory of practice architectures prompted the asking of certain kinds of questions which were helpful in the interpretive process (See Chapter 1 of this book – Mahon et al. (2017) – for an explanation of key concepts and assertions in the theory). Examples of such questions are provided in Table 11.1. The questions afforded a more focussed analysis of the role of power in the prefiguration (Schatzki 2002) of pedagogical practice than might have been possible if drawing solely on the ideas of Schatzki. Schatzki's work (e.g., 2002, 2012) is useful for understanding relationships between practices, sites, and arrangements, but it does not explicitly theorise power in social relations. By contrast, the theory of practice architectures enabled a level of critique of the existing conditions appropriate for social justice-oriented research.

The theory of practice architectures, and the questions it prompted, informed analytical processes on an implicit level. However, key concepts, and the questions identified in Table 11.1, were also embedded more systematically and explicitly in certain tools developed to aid analysis in this research study. An example of this is an analytical template based on the theory of practice architectures. The template – referred to in the project as the 'Practice Architectures Template' (or 'PA Template') – was adapted from a "table of invention for analysing practices" developed by Kemmis et al. (2014, p. 39). It was used in Kathleen's project to analyse selected transcripts and observations.

In the interests of critical discussion about the theory, we wish to raise a tension experienced in using the theory for empirical analysis. There is the potential for the categories inherent to the theory (e.g., cultural-discursive, material-economic, and social-political arrangements) to take over the analytical process (e.g., by prompting such questions as, 'Is this policy a cultural-discursive arrangement or a social-political arrangement?'). This is a danger because the categories are only analytical categories. In reality they are interpenetrating and exist simultaneously; we do not encounter them independently of one another in everyday life. In order to "disrupt an inclination to categorise" unconstructively, and to see "the salient narratives" (Mahon 2014, p. 257) present in the site, a decision was taken in the project to use multiple analytical processes, including summary and narrative writing. The 'Practice Architecture Template' referred to above was used in a secondary layer of analysis, rather than in the early stages of analysis, for similar reasons.

Enacting Critical Pedagogical Praxis

Analysis of the pedagogical practices – composed of sayings, doings, and relatings held together in the project of a practice[3] – of the main participants in the research study gave rise to insights about the nature of critical pedagogical praxis and what it can look like in higher education. Critical pedagogical praxis emerged as "highly complex context-sensitive, idiosyncratic, multifarious, risky, and hard work" (Mahon 2014, p. 260). It varied from person to person, and site to site, and was enacted variously through four aspects of practice:

1. *endeavouring to understand* the pedagogical and academic landscape, the people we are working with, and our practice;
2. *responding appropriately and being responsive* to the people, arrangements, and circumstances in any given situation;
3. *creating conditions of possibility* for learning and praxis development, including our own learning and praxis development; and this includes creating architectures that can sustain the embodiment of critical pedagogical praxis despite challenging circumstances; and
4. *embodying and evoking criticality.* (Mahon 2014, p. 130)

We return to these four aspects of practice later in the chapter, and refer to them as the 'four praxis themes'.

The research also showed that a complex combination of factors appeared to be enabling and constraining the pedagogical practice of the participants. These factors included practice architectures pertaining to the sites of practice (which we discuss shortly); other practices (e.g., research and scholarship practices, student learning practices, and leading/management practices); and factors related to practitioner capacity (e.g., dispositions and knowledges). It also varied depending on the cir-

[3] See Chapter 1, this volume.

cumstances, and the particular sayings, doings, and relatings of the educators. Nevertheless, some key practice architectures emerged as significant, in terms of enabling and constraining critical pedagogical praxis, across different pedagogical sites and individual educators' practice.

Practice architectures were found to be enabling or constraining depending on whether they created/contributed to or eroded/undermined one or more of the following:

1. time (e.g., for interrogating practice, building relationships, engaging in critical debate);
2. space for creativity;
3. space for autonomy and flexibility;
4. positive, productive, and trusting relationships;
5. rigorous critical dialogue and reflexive conversations; and
6. opportunity for engagement and experience (Mahon 2014, p. 222).

We refer to these as 'conditions of possibility' (Kemmis et al. 2014, p. 37) for critical pedagogical praxis.

Practice architectures of particular importance in generating and maintaining these conditions of possibility, and of relevance to our discussion below of the merger, were collegial relationships, and informal professional learning activities and communities. On the other hand, the conditions of possibility appeared to be eroded or undermined by practice architectures related to, among other things, accountability pressures, work intensification, and standardisation of practices (Mahon 2014). These are conditions that, with the spread of neoliberalism, are being experienced in universities all over the world (see Connell 2013; Ball 2012). As we show in the sections that follow, the merger was a practice architecture that created tensions for the enactment of critical pedagogical praxis by affecting, sometimes indirectly, these aspects of academic work. Yet, as we also illustrate, university educators were able to respond to their conditions in positive, constructive ways.

The Merger

In the first year of the research project, the University Faculty[4] to which the main participants belonged went through a restructuring process that saw the merging of two schools located on separate campuses in different cities (Campus X and Campus Y).[5] Prior to the merger,[6] the two schools had operated relatively autonomously.

[4] In Australian universities, 'faculty' refers to an organisational unit rather than academic staff.

[5] The University referred to here is an Australian multi-campus, regional university.

[6] The term 'merger' refers to a process whereby two or more firms, institutions, or departments (or schools within a faculty) are combined or integrated to form a new organisation. Although the term

Although the schools were overseen by a single Dean, each had its own Head of School, its own identity and, despite cross-campus teaching arrangements for some of the courses offered by the Faculty, campus-specific ways of operating. The aim of the merger was to create a single school, split between two sites, managed by one Head of School. This restructure was justified on the basis of sharing 'capabilities', creating 'efficiencies' and 'alignment' across the schools, and more effectively 'deploying' staff and resources. The shifts were a response to the broader University's focus on reducing courses/subjects, and on greater accountability at the discipline and course level as well as at the school level.

The merger was not a whimsical initiative, nor an event that sprang from nowhere. It was borne of a particular set of practice architectures and practices extending beyond the Faculty. At the time, and it is still the case, the University was feeling the pressures being experienced across Australian universities of diminishing government funding relative to growth (Sappey and Bamber 2007 December),[7] increased student diversity (Harman and Meek 2002), and changing community expectations. With this has come increased competition between universities (Marginson 2010) and an imperative for institutions to "stay afloat and keep mission intact" (Sharrock 2007, p. 9). These pressures have filtered down to the organisational level of faculties, taking the form of accountability and cost-cutting measures.

Mergers are seen as one means of addressing financial pressures, but not a particularly new one for the Australian higher education system. Many Australian universities operating today were established via the amalgamation of institutions through the creation of the 'Unified National System' of higher education institutions in Australia, part of a cost-saving, higher education reform (Harman 2002) in Australia in the late 1980s.[8] The 'Unified National System' saw the reduction in the number of higher education institutions via the merging of Colleges of Advanced Education, in some instances with one another to form new universities, and in some instances with existing universities (Harman 2002). This reform was associated with a shift within higher education from "collegial to corporate" governance models (Sappey and Bamber 2007 December, pp. 7–8), and the adoption of modes of operation commensurate with neoliberal ideals (see Marginson 2004). In many respects, what was experienced as a departmental merger by people in the Faculty studied in this research could be viewed as a legacy of the penetration of a neoliberal ethic into the higher education system a few decades ago, sustained and perpetuated by government reform aimed at tightening expenditure and control of the university sector.

The merging of the two schools necessitated some significant changes. This included a restructure of the middle management positions, as well as a rationalisa-

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is usually associated with the corporate world, we use the term deliberately to signify the neoliberal influences at play. The process was also referred to as 'the merger' by people in the Faculty at the time.

[7] Most universities in Australia are government funded.

[8] Introduced by the federal Minister of Education at the time, John Dawkins (see Australian Government 1988).

tion and reassignment of duties and responsibilities for both academic and administrative staff within the newly-formed school. It also meant changes to administrative procedures, and avenues of communication. Coinciding with the transition were other major Faculty-wide changes. This included a review of existing courses leading to a restructure of the degrees offered by the Faculty. There were also changes being made to some key roles within the Faculty to facilitate cross-campus teaching across all campuses. For instance, the role of campus-based Course Co-ordinator ceased to exist, and instead faculty-wide Course Directors were appointed to manage courses being offered on multiple campuses.

The merger brought with it a degree of disruption, uncertainty, and anxiety.[9] Words such as *"instability"* and *"eruption"* were among those used by participants in the study to describe the merger. One person explained: *"We're not quite sure what the new structures will be, what our places will be within the new structures etc."* (Participant comment).

Uncertainty, anxiety, and a sense of disruption are common side effects of mergers according to merger research (see Stephenson 2011, p. 118; Cartwright and Cooper 1994). Mergers have been described as highly "emotive and potentially stressful events which affect almost everybody involved" (Cartwright and Cooper 1994, p. 56; see also Stephenson 2011; Ursin et al. 2010). Mergers can have positive effects such as addressing financial viability issues (Stephenson 2011). However, anxiety can ensue because the change associated with mergers is often large scale, sudden (Cartwright and Cooper 1994), and radical (Harman 2002). Cartwright and Cooper explained that "when an organization is fundamentally changed, the psychological contract – the expectations that the individual has of the other – is broken, becomes unclear and has to be re-established or negotiated" (p. 58).

Examining the merger of the two schools in the research study through the lens of the theory of practice architectures can shed light on its complexity and impact. The merger was one of several events happening in the Faculty during the research, and it was only a small part of what constituted the "practice landscape" (Kemmis et al. 2014, p. 5) of the relevant schools. The degree restructure and changes from campus-based Course Co-ordinators to faculty-wide Course Directors, mentioned above, are some examples. Nevertheless, it was significant at the time for staff on the campuses involved (and perhaps students, indirectly, as we suggest later) because practices and practice architectures were disrupted; the landscape was in a state of flux. The merger was effectively changing what people were saying (and thinking), doing, and how they were relating in their everyday practices. People's sayings, doings, and relatings (Kemmis and Grootenboer 2008) were changing because the existing cultural-discursive, material-economic, and social-political arrangements (Kemmis and Grootenboer 2008) were changing and vice versa.[10]

[9] This discussion about the effects of the merger is based on what was experienced on Campus Y.

[10] See Kemmis et al. (2014) and Mahon et al. (2017, Chapter 1, this volume) for an explanation of sayings, doings, and relatings, and the three kinds of arrangements that comprise practice architectures (cultural-discursive, material-economic, and social-political).

The merger affected the existing *cultural-discursive arrangements* in particular ways, one of which was the merging of different discursive and cultural traditions (such as those associated with campus-based meetings and committees) bound up with the cultural identities of the respective schools. Furthermore, expressions used by people to talk about the merger (e.g., 'finding efficiencies', 'rationalising', 'resource deployment') reflect managerialist discourses (Sachs 2001) associated with new public management and the contemporary neoliberal university (Davies and Bansel 2007). This language was not new to the University, but raises questions about whether it may have inadvertently taken on greater significance or gained legitimacy for affected staff because the merger was such a critical incident.

Overlapping with cultural-discursive shifts were changes *to material-economic arrangements*. Staffing roles and responsibilities changed as (a) the procedures and policies of the two campuses were brought into line with each other, and (b) resources and positions were 'rationalised'. The most significant of the positional changes involved leadership positions in the merging schools and the newly formed school. This impacted on face to face student access to campus-based Course Coordinators, as new online support systems were introduced. New systems and resources (e.g., forms) were developed (or old ones were modified) to accommodate these changes. The rationalisation of resources affected the way that academics worked (e.g., academics' liaison with preservice teachers and schools during professional experience was withdrawn from the teaching workload), requiring academics to find new ways of engaging with the profession through research.

Cross-campus arrangements also increased the use of technology for communication purposes. Video-conference meetings had already been occurring for cross-campus teaching prior to the merger. After the merger, they became a standard arrangement for interactions between staff more generally. This included things such as staff meetings, committee meetings, and professional learning opportunities (e.g., seminars).

Social-political arrangements changed as new hierarchies between campuses, between the school staff and faculty management, and between people within the merging schools emerged with the changing positions and job descriptions. The merger was a managerial ('top down') initiative rather than a change process that was initiated by the staff in the merging schools. This had the effect of creating uncertainty for staff in terms of job security and leadership opportunities, and was accompanied by a concern for the future viability and status of the Faculty.

These changes to existing practice architectures made possible and/or provoked certain kinds of sayings, doings, and ways of relating, notably, what people were *saying and thinking* about the Faculty, their School, their practices, and themselves as academics. In the earliest stages of the restructure (and research project), as the uncertainty percolated, the merger was a common topic of conversation between academics. As time went on, a sense of loss permeated staff talk as the impact of the merger was felt. This sense of loss related to identity on the one hand, and autonomy on the other.

A sense of a *"loss of identity"* (Participant comment) is not unusual in mergers according to Cartwright and Cooper (1994). These authors, citing Humpal (1971, as

cited in Cartwright and Cooper 1994), noted that mergers are rarely "a marriage between equals" (p. 49), and often the identity of the newly formed body/organisation assumes the identity of one of the merging bodies. Thus, there can be a feeling of loss of identity for one of the merging bodies, and/or fear of being dominated by another merging party (Cartwright and Cooper 1994). In the case of the merger being described here, there was a concern at Campus Y that Campus X ways of operating would become *modus operandi* across the two campuses, creating a social-political tension as well as cultural-discursive one. There was also apprehension about the potential loss of "social anchoring in a shared culture, shared social order and shared social identity" (Kemmis 1998, p. 278). One participant described the sense of loss regarding identity as follows:

> It's not just about a shift in management is it? ... To me ... at least some of it is to do with identity and the identity of the school has been profoundly ruptured; disrupted and ruptured. So it is not the same school. It is a very different entity now they are trying to create. (Participant comment)

Closely related to this was a perceived loss of academic autonomy. In addition to concerns about one culture being absorbed into another, there was a sense of a loss of individual and campus-based autonomy, especially with the standardisation of practices across the two campuses, and fear of diminished voice in meetings with those in leadership positions having to split time between campuses. Could people's time being split in this way mean that staff would be one step removed from decision making processes, diminishing their capacity for self-determination and self-expression (Young 1990) regarding issues that affected their practice? Perhaps the increasing size of the school added to this sense of a loss of autonomy, since "increased organizational size in itself has been shown to reduce ... perceptions of influence" (Cartwright and Cooper 1994, p. 57). There was a concern, too, that loss of autonomy at a campus level would affect the capacity of the School to be responsive to the local community. We return to this point later in the chapter.

The changing of positions and alterations to role descriptions affected, and stemmed from, what, and how much, people were *doing*. There were changes to the nature of activities and how tasks were performed. In some cases people were doing entirely different jobs. Staff workload, not surprisingly, was impacted (cf. Cartwright and Cooper 1994, p. 56). In order to ensure that the schools could function in the transition period, many took on additional work until the various positions and the role descriptions were finalised. Those with new responsibilities had to learn new ways of doing things. Some were involved in the facilitation of the change process, for example, through participation in a merger working party.

Changes to ways of *relating* were also evident. People were having to renegotiate their relationships with each other in various aspects of their work, especially with the expansion of cross-campus arrangements (e.g., in teaching teams spanning two campuses). As noted above, ways of relating were now mediated by technology to an extent not previously experienced.

The Merger as a Practice Architecture for Pedagogical Practice

Some of these changes created tensions for university educators trying to enact and embody critical pedagogical praxis, both in a collective sense (in community with other academics), and in an individual sense (in their interactions with their own students). One of these tensions relates to the first of the four praxis themes mentioned earlier in the chapter: *endeavouring to understand* the landscape. Understanding the landscape at the time was made more complex and difficult because of the state of flux, confusion, and uncertainty that the changing architectures and practices engendered. It could be argued that the educators were effectively endeavouring to understand a new landscape, one now spanning two cities and surrounding communities, and incorporating more staff and students, and subsuming the two culturally and historically distinctive landscapes of the merging schools. One participant in the project outlined above commented,

> I always try and make as much of an effort as I possibly can to know and understand who are these people I'm working with, even though there's 120 of them in the group. I try my very best. But I'm finding because of these other things going on, that I'm not doing it as well. (Participant)

Endeavouring to understand the landscape is an important aspect of critical pedagogical praxis because it is necessary for being able to *be responsive and respond appropriately* to people and situations characterising that landscape (the second praxis theme noted above). Being responsive and responding appropriately additionally requires that practitioners read and understand a social situation to create possible options, draw on practical wisdom (phronēsis) to determine what the appropriate thing to do is, and have the flexibility and autonomy to act on the options available and change action in light of consequences. A sense of diminished autonomy and the standardisation of practices accompanying the merger to some extent limited the space for flexibility of the university educators and their capacity to be responsive to local circumstances and the local community served by the respective campuses.

Critical pedagogical praxis also involves *creating conditions of possibility* (the third praxis theme). As with the two praxis themes just mentioned, creating conditions of possibility is intellectually demanding and time consuming. For example, it requires time and energy to source and create engaging, critical resources; to plan challenging, provocative teaching-learning activities; and to build positive relationships conducive to critical conversation and engagement. The merger affected the amount of time available to educators for this kind of intellectual and relational activity. The stress associated with the merger may also have affected people's capacity for creative, intellectually demanding work.[11]

[11] Empirical material generated in the research suggested that this was likely. However, there were other events happening at the time that were also impacting on people's experiences of stress and

Evoking and embodying criticality (the fourth praxis theme) involves challenging peoples', and our own, assumptions. This requires willingness and confidence to take risks, both of which can be tempered amidst a climate of instability and uncertainty, especially if people feel less safe. Being part of a collegial, critical community was identified by participants as important for maintaining their criticality, in their work generally, and in their work with students specifically. One participant explained why feeling safe was so important:

> If I don't feel safe and I worry that people are actually competitive or people are silo-like in their practice, it limits my ability to do it [i.e., ask interrogative questions] because I then have to work on finding the courage to stand in a professional community by myself if I have to, and then do it with the students. (Participant)

Sustaining a critical community can be difficult when staff are time poor, and when open communication is affected by the uncertainty and insecurity that mergers induce. Nevertheless, there is an important and paradoxical flipside to this that we illustrate in the next section: conditions that may seem constraining can sometimes provoke praxis and criticality.

Negotiating Architectures, Provoking Praxis

The merger of the schools has since passed, and conditions in the setting have stabilised somewhat.[12] However, there are some lessons that can be learned from the ways in which university educators were able to negotiate and respond to their conditions and circumstances (including tensions for enacting critical pedagogical praxis) in positive ways, both in their interactions with students, and through their engagement in professional activities with colleagues.

In many respects, it was a matter of people simply getting on with their jobs as best they could. Some chose to respond more proactively, however, by changing, reorienting, or creating particular practice architectures. This in itself could be regarded as a form of critical pedagogical praxis (see Mahon 2016).

One way of responding was through participation in collaborative professional learning with colleagues. The participants in the study belonged to a pre-established group (a 'community of practice' – Wenger et al. 2002) before the project began. The group met regularly outside business hours to discuss their work as academics. These meetings continued during (and became part of) the research project. The group meetings constituted an important "communicative space" (Habermas, 1996, as cited in Kemmis and McTaggart 2005, p. 294) in which the participants could collaboratively examine various practices and the circumstances of their academic

capacity for creative and intellectually demanding work. Thus, there may have been other factors at play.

[12] This stability may be short-lived. Since initially drafting this chapter, a university-wide restructure involving the amalgamation of faculties, and a restructuring of schools within faculties, has been introduced by the University's executive.

lives, including their struggles. The meetings provided opportunities for the group members to develop their understanding of, and challenge each other's assumptions about, the changing academic landscape and the role their practices played in that landscape. Sometimes this meant drawing on their own scholarship and research activity in the conversations to help make sense of how events (like the merger) were affecting academic practices. The group participants were also able to support each other, and find and nurture solidarity and collegiality. In this sense, the participants were able to create *conditions of possibility* for each other. Critical conversation was an important part of these gatherings, including critical reflection on the participants' own part in unfolding events such as the merger. Importantly, the meetings were spaces to deliberate critically about what to do to transform or negotiate constraining architectures. Some might call the creation of this practice architecture "activist professionalism" (Sachs 2000, p. 85), a move to "make things happen" rather than "let things happen" to the people involved (p. 85). To put it in terms used by one of the participants in the study: *"use the machinery rather than complain about it"* (Participant comment).

Some people in the Faculty found sustenance and inspiration by immersing themselves in researching and teaching, academic activities they regarded as self-sustaining. One of the participants in the study, for instance, talked about her teaching becoming a source of solace during the merger, her teaching being *"one of the few things"* that she considered stable and over which she had some *"control"* (Participant comments). Others found *"spaces of agency"* (Participant comment) through involvement in activities and committees that were aimed at facilitating the merger process. An example of this at a school level was the creation of a communicative space within an existing teaching and learning committee to respond to the merger proposal. Our second author, Letitia, was part of this committee. The committee provided the opportunity for concerns to be raised collectively and forwarded anonymously to senior staff for consideration. Again, a sense of solidarity and collegiality was an important enabler for action.

A further example of responding positively to the circumstances and conditions was by treating constraints as opportunities, for example, using the merger as an opportunity to *"bring our traditions together"* (Participant comment) and create new traditions. Early in the merger, a staff retreat was organised by the Faculty executive to facilitate the merger process. This was, in a sense, an opportunity to foster cross-campus understandings and to allow new solidarities to develop. It was also an opportunity for staff to engage with each other as fellow learners. Staff used this as a space to share stories, knowledges, and traditions, and to begin the work of building a new identity, strengthening relationships, and restoring balance through the collective creation and transformation of some key practice architectures.

So, while the cultural-discursive, material-economic, and social-political arrangements associated with the merger created tensions for embodying critical pedagogical praxis – for example, by affecting people's time, energy, and capacity for activity aimed at deepening understanding of their practice and pedagogical landscape; being responsive and responding appropriately to people and circumstances; creating conditions of possibility; and embodying and evoking criticality –

praxis continued to be embodied and provoked positively. Creating conditions of possibility for praxis development and learning is not confined to the realm of academics in their classrooms, but extends to university educators' interactions with peers, through the creation of communicative spaces for critical reflection. Academics involved in the merger, as the examples just outlined indicate, were able to do this in varying ways, despite and amidst tensions induced by the changing conditions. They did so by creating, maintaining, or using practice architectures (like the 'community of practice', the teaching and learning committee, and the staff retreat) to build solidarity and collegiality, and allow the safe exchange and critique of ideas, especially in relation to what was transpiring and its educational consequences.

This does not negate the need for careful management of critical events such as mergers that impact so profoundly on the daily practices of university educators. Our analysis of the merger through a practice architecture lens suggests the need for the practice architectures such as mergers to be problematised and not taken for granted as an economic fix without educational consequences. Mergers, if they need to happen at all, must be very sensitively negotiated. People involved need time and support, flexibility and autonomy, and space to openly debate and understand the implications of changes (in educational and economic terms) in order to respond to circumstances (i.e., *act*) in ways that are most educationally and morally appropriate. Openly debating and understanding the implications of change is crucial for nurturing and embodying critical pedagogical praxis. And critical pedagogical praxis is exactly the kind of practice that is needed to negotiate practice architectures, and to create educational possibilities, amidst university change.

Conclusion

In this chapter we showed how the theory of practice architectures can illuminate challenges facing university educators endeavouring to enact critical pedagogical praxis in higher education. We did so by discussing a critical incident, a departmental merger, within a particular university from a practice architecture perspective. Despite being peripheral to pedagogical practice, mergers or restructures can affect pedagogical practice in ways that might be overlooked in the haste to address ever-diminishing fiscal resources, and accountability pressures from funding and professional bodies, and the community. The theory of practice architectures, put to work analytically, can open our eyes to the salient arrangements prefiguring pedagogical practice in the university sector and the significance of managerial and neoliberal policies and practices. More specifically, conceptualising events linked to neoliberal ideals – such as mergers – as practice architectures, enables us to understand the extent of their impact on pedagogical practice, as well as what contributes to, and shapes, their unfolding. Such an understanding is important for determining the appropriate critical action to take to avoid negative consequences and create

alternative futures regarding the project of education. This is especially so at a time when reform mechanisms such as mergers are becoming more common in universities.

In the process of writing this chapter, the theory of practice architectures heightened our sensitivities to power relationships surrounding the representation of practices and practice architectures, and how those power relationships can enable and/or constrain what is told and what is silenced. Hence there are many sensitive parts of the merger story that we have chosen not to tell in this chapter. On a personal level, the reconstruction of the critical incident through the lens of the theory of practice architectures provided an opportunity for us, as writers, to better understand the pedagogical and academic landscape of higher education; to think critically about what it means to be responsive and respond appropriately in the face of challenges to our own praxis-oriented aspirations; to embody and evoke criticality through our writing; and, hopefully, to create conditions of possibility for praxis by contributing to the discourse of the educational community.

Where to from here? There needs to be an honest reconsideration of how we enact critical pedagogical praxis, both within and beyond university campuses, to respond to our stakeholders in education in ways that are "reflexive, informed and morally committed ... in which harmful or unsustainable practices and power relationships can be understood and reoriented, and in which new possibilities for action can emerge and be enacted" (Mahon 2014, p. 4). In light of the empirical material supporting critical pedagogical praxis, we ought to keep asking ourselves: How are we *endeavouring to understand* the pedagogical and academic landscape, the people we are working with, and our practice? Are we *being responsive and responding appropriately* to the people, arrangements, and circumstances with which we have relationships? How can we *create conditions of possibility* for critical conversation and engagement which allow us to challenge our practices and take risks, and thereby *embody and evoke criticality* in a collegial, critical community? And what are the risks of allowing neoliberal values to dull our sensitivities and responses to such questions?

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Chapter 12
Articulating the Practice Architectures of Collaborative Research Practice

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Abstract This chapter explores a collaborative practice of comparative data analysis through the researching activities of four researchers from Australia and Finland. We interrogate the ontological and empirical reality we experienced while engaged in a practice of analysing narrative data on mentoring. In this chapter, we are not reporting on the outcomes of our analysis of mentoring practice; instead we focus on our collaborative engagement, articulating the practice architectures of our research practice. This collaborative research practice was pre-figured by: (1) philosophical traditions instituted through a theory of practice architectures; and (2) normalised practices of researching mentoring, narrative data analysis, and research collaborations. By examining these preconditions we are attempting to understand the multifaceted space of research collaboration and the practice architectures of our collaborative research practice.

The study shows that the three kinds of arrangements that comprise the practice architectures of research practice (i.e., cultural-discursive, material-economic, and social-political arrangements) are foregrounded differently at different stages of research analysis. In the researchers' collaborative engagement, the material-economic arrangements were most visible and explicit in the beginning of the analysis (first order analysis). However, more of the cultural-discursive arrangements and social-political arrangements became apparent after further contemplation (second order analysis). Analysing the differing degrees of visibility of these three types of arrangements in our analysis is significant since they occur as an enmeshed ensemble in reality.

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It is the norm that most research papers, books, and theses that examine reflective research focus on the range of relationships that evolve while in the process of doing research with others (e.g., participants, practitioners, and other researchers) and the ethical dilemmas that may emerge from this process. Whatever the rationale, reflecting on research is complex; it is a critical metacognitive exploration that is not easily defined. It leads to the creation of metaphors to "help explain, appreciate and create different meanings", uncover the "effects of blind spots" (McClintock et al. 2003, pp. 716–717), and make sense of research encounters. The literature on reflective practice indicates that much of the writing in the area tends to focus on the social, political, and emotive (ethical dilemmas) effects and affects of engaging in research with others (Hickson 2011). This chapter, however, examines a rarely considered aspect of reflecting on research practice. We reflect, at a general level, on research actions and, at a particular level, on collaborative research as a practice in itself. In other words, our intentions are not oriented towards forging new identities, but towards exploring with fresh appreciation the practice conditions which prefigure our collaborative research practices. In so doing, we aim to make sense of how we *do* research in collaborative sites.

We explore the created and discovered (as already pre-existing) practice of data analysis through the researching and sensemaking (Weick 1995) activities of four researchers from Australia and Finland. By 'created and discovered' we mean that we utilised research methods that already existed, but also combined and modified them to serve our purposes, eventually leading to the creation and development of new researching methods. Our aim is to explicate the practice architectures of a research practice that emerged in a collaborative study. Making sense of what enables, sustains, and constrains an empirical exploration of a research topic requires a consideration of the arrangements in which researchers and researching mentoring practices are enmeshed.

Theories and research methodologies can be seen as practice architectures enabling and constraining a scholarly investigation. However, our experience shows that cultural-discursive, material-economic, and social-political arrangements are foregrounded differently at different stages of analysis. In the interrogation of the data in our respective studies, the material-economic arrangements and (to a lesser extent) the cultural-discursive arrangements appeared to be more explicit than the social-political arrangements. To reveal the enmeshed practice architectures as a whole, we needed to do further investigation to make the initially implicit social-political arrangements visible.

The exploration of collaborative practice is significant as the research literature suggests that the results and outcomes of collaborative research practices may be quite contradictory. On the one hand, team research is reported as promoting analytical richness and depth. On the other hand, there are suggestions that "fragmented interpretations" can occur in collaborative methods, leading to incoherent or inconsistent thoughts and theories[1] (Sumsion 2014, p. 153). With this enquiry we explicate

[1] The phrase 'fragmented interpretations' refers to the attendant risks that may flow when a team of researchers from different backgrounds do not collaboratively examine the differing perspectives

the practice architectures of collaborative research practice and illustrate how this practice is enabled and constrained in an effort to answer the demands of the traditions of research practices. The chapter is organised in three key movements which highlight stages in the development of our reflective process. First, we describe our collaborative research practice. Where it is typical to open the argument with a description of the epistemological framing, we start with our methodological assumptions and description of the particular research practice. Second, we illustrate the thinking that prefigures our actions as researchers. Third, we render visible our reflective narratives and then move between these narratives in order to make explicit the practice architectures which conditioned our collaborative research practices.

Collaboration Built Over Time and Within International Research Sites

Before outlining the nature of the collaborative research practices that form the basis of the inquiry, we briefly describe how we first came to work together and the research sites which prefigured these practices. Matti Pennanen started his academic working career in 2012 after graduation from the teacher education department at the University of Jyväskylä, Finland. He was accepted for doctoral studies in August 2013 in the University of Jyväskylä and Hannu Heikkinen was designated as Matti's supervisor. Laurette Bristol is originally from Trinidad and Tobago and she completed her doctoral studies at the University of Sheffield, UK. She continued her postdoctoral career at Charles Sturt University, Wagga Wagga, Australia. Jane Wilkinson is an Australian scholar who was working at Charles Sturt University when Laurette moved to work for the same university. Hannu Heikkinen has made his career on action research and narrative research among other areas, while working at the University of Jyväskylä.

Hannu, Jane, and Laurette first met in 2010 at a Pedagogy, Education, and Praxis (PEP) international research network meeting in Australia. At the time of the research meeting in 2010, both Hannu and Laurette were being initiated into the research and learning practices of the researchers in the network. In this practice site of international research collaboration, Jane, Hannu, and Laurette realised that, despite the differences evident in their distinct cultural and national backgrounds – and to a lesser extent, their research interests – they shared commonalities through their core philosophy and researching practices, which were being made manifest during the week of research conversations. These evolved around an interest in social justice, the nature of in-service mentoring, and the means through which systems can be navigated to enhance teacher capacity and professional learning.

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or theories they bring to a collaborative study. When the differing epistemological and ontological assumptions of researchers are not made explicit, this can lead to eclecticism and potentially incoherent and inconsistent theories and conclusions.

These connections were strengthened as time passed via virtual meetings, cross-national collaborative projects, annual PEP international research meetings, and conference presentations.

At the local levels, collaborative synergy was supported through research projects between Laurette and Jane in New South Wales, Australia; where they undertook a study which explored the practice of school transformation in a rural context and the ways in which the constitutive practices of professional learning and leading in cross disciplinary teaching teams at the Secondary (High) school level were enhanced through peer-mentoring practices. For Hannu and Matti in Finland, collaboration was harnessed through research projects on mentoring and through the mentoring relationship between Hannu and Matti, in which Hannu fulfilled a system position as Matti's PhD supervisor.

In 2013, Jane and Laurette were visiting scholars in Jyväskylä and, during that visit, initiatives were taken to organise a research collaboration with the team of four researchers: Matti, Hannu, Jane, and Laurette. Eventually, the two collaborative projects being enacted in Australia and Finland came together through a month of research conversations between the team members in Australia in 2014. In this shared space, our first collaborative publication was realised: *What is "good" mentoring? Understanding mentoring practices of teacher induction through case studies of Finland and Australia* (Pennanen et al. 2015). The reflexive component of collaborative research (Wang 2013), the collaborative projects that were fostered through partnerships (Godoy-Ruiz et al. 2015), and the boundaries that were blurred (Meerwald 2013) through the processes and practices of the collaborative research experiences, form the basis of the inquiry in this chapter.

Depiction of the Research Practice

Method of Reflective Narrative

We begin with a description of the method of explicating our research practice. Our aim was to produce as accurate a representation of our practice as possible, similar to the idea in Picture 12.1.[2] The painting (in front of the window) represents the view from the window and tries to mimic the visual experience. However, the technique, the *point* of view, and the window prefigure and frame the visual experience. From another perspective, and with a different technique, the visual experience of the painting will be of a different kind. We aimed for an accurate representation (with reflective narratives) of our research practice with the given method, perspective, and frame (of practice architectures), and the understanding that it offered a view of reality within limitations. In the discussion that follows, we explain how we created our representation of our research practice using reflective narratives.

[2] All pictures included in this chapter have been reprinted with permission.

Picture 12.1 "La condition humaine" by René Magritte (1933):
"In front of a window seen from inside a room, I placed a painting representing exactly that portion of the landscape covered by the painting. Thus, the tree in the picture hid the tree behind it, outside the room. For the spectator, it was both inside the room within the painting and outside in the real landscape. This is how we see the world. We see it outside of ourselves, and at the same time we only have a representation of it in ourselves." (Leatherbarrow and Mostafavi 2005, p. 39)

We used the question *what are the practice architectures of our collaborative research practice?* to generate our reflective narratives. This is similar to what is understood as autoethnography in research (du Preez 2008). Our inquiry was a means of making evident the practice arrangements which constituted our practice of collaborative research. In other words, we produced a meta-analysis; we analysed our research practice when we investigated two cases of mentoring practices in Finland and Australia. For this current inquiry, we made explicit the *sayings*, *doings, and relatings* of our collaborative research practice. We, authors of this chapter, had multiple roles: we were the participants in the collaborative practice; we were the reflectors who produced the data for this chapter; and we are now explaining the method and results of the narratives. We gave ourselves the task of constructing individual critical narratives that described, from our own points of view, how we made sense of the collaborative research practice we engaged in during 2014 when we collaboratively analysed case study data collected in Australia and Finland. As such we created a "communicative space for personal narratives around a common theme" of *what we were doing as we made sense of the data together* (Cardiff 2012, p. 608). 'Making sense' refers to a certain philosophy or an approach that we utilised in our practice to formulate a linguistic (written and spoken) and comprehensible description of our research practice.

Sensemaking is a process where "circumstances are turned into a situation that is comprehended explicitly in words" (Weick et al. 2005, p. 409). Sensemaking is not

about finding the "correct" answer; it is about creating an emerging picture that becomes more comprehensible through data collection, action, experience and conversation (Ancona 2005). The concept is well named as it literally means the making of sense (Weick 1995), which also involves the interplay of action and reflection. People do not *just* perform and afterwards reflect on their action. Rather they start to interpret the world immediately as their actions unfold, and during the actions they are able to plan their upcoming moves according to interpretations to achieve the desirable outcome. In this instance, we needed to make data (reflective narratives) of our practice while producing a comprehensible description of the practice architectures. The description is not merely a post-action reflection as it involves the thinking involved during the research action.

Once generated, our narratives were subjected to collective scrutiny where we followed a line of reasoning similar to what we applied to the investigation of mentoring practices in our first empirical paper (Pennanen et al. 2015). Thus, for this current interrogation we engaged in two types of reasoning for our reflective narratives: inductive reasoning (first order analysis – seeing what was there; Ary et al. 2013) and abductive reasoning (second order analysis – identifying what was missing; Josephson and Josephson 1996). Interrogating our research narratives through these questions we itemised first, *what was there, the obvious* — the sense that we made of collaborative research. This highlighted the research actions that we understood collectively — the cultural-discursive and material-economic arrangements that prefigured our practice(s); for instance, how we spoke to each other and characterised ideas.

Second, we identified *what was not as clearly seen, the less obvious* — the unstated but very active dimensions of (for example) ethnicity, culture, gender, previous relationships, (such as members of an international research network and student-supervisor relationships), and also traditions of doing data analysis as individuals. These were among the social-political arrangements and the cultural-discursive arrangements that shaped how we worked together, what was said and not said, and what was done and not done; the compromises we made and negotiations we engaged in as we sought consensus for research actions. Before we identify these unstated dimensions, we need to point out what was obvious in our research practice.

Identifying the Practice Architectures of Our Research Practice

According to the theory of practice architectures, ontologically speaking, practices are located in sites, which have their own peculiar practice landscapes and practice traditions. In these sites, people and objects are enmeshed in an interactive practice in activity-timespace, which is also part of a historical continuum (Kemmis et al. 2014). Figure 12.1 is a general modelling of the *obvious* elements of our collaborative research practice, which emerged from our reflective narratives. By depicting

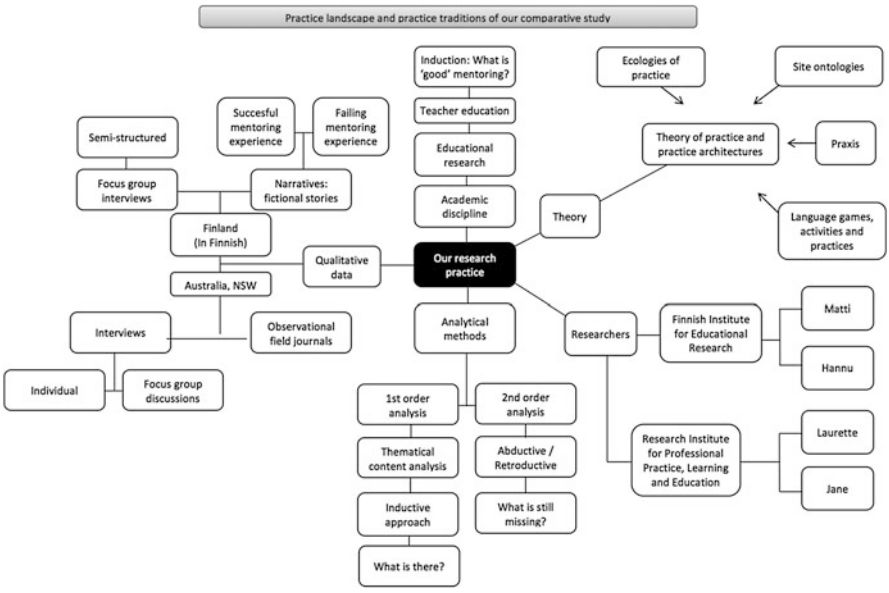


Fig. 12.1 Mind map of the practice landscape and practice traditions

the elements, we are able to form a structured conception of the practice and also an outline of the arrangements of our research practice that were evident in our reflective narratives.

There were five major categories which were obvious elements for our research practice in our reflective narratives: *researchers, theoretical frame, academic discipline, qualitative data, and methods of analysis.* These five categories are shown in the Fig. 12.1, with lines leading from the centre to each category. The most obvious category in our reflections was "researchers", of whom two were employed by the Finnish Institute for Educational Research, and initially (in November 2013) two were employed by the Research Institute for Professional Practice, Learning and Education (RIPPLE), Charles Sturt University. The important notion is that we engaged as individuals in the researching practice and the practice was partly shaped by our different personalities, backgrounds, experiences, expertise, and dispositions. As such, we (as participants) constituted the three kinds of arrangements: (1) the material-economic arrangements as we were (and are) human beings and work in the limitations of human capabilities; (2) cultural-discursive arrangements with our different nationalities and languages; and (3) social-political arrangements with our different ways of relating to each other.

The second category was *theory*, which leads to a theoretical frame of our research practice, i.e., the theory of practice architectures. In our reflective narratives we mentioned or described theoretical aspects of *ecologies of practices,*

site ontologies, *praxis*, *language games, activities, and practices*, which are all parts of the theory of practice architectures. These aspects were significant parts of the theoretical discussion of our research practice as we tried to understand how we individually perceived them and how these ideas were visible in our research topic.

The research topic defined the *academic discipline* (third category) of our research practice. Through the topic (mentoring practices of teacher induction), our practice was located in the field of educational research, more specifically in the subtheme of teacher education and precisely in the area of teacher induction. Theory and the academic discipline together prefigured the practice traditions; for instance, what has been done earlier in the research literature of teacher induction or how the theory of practice and practice architectures was previously applied for analytical purposes. Also these frames prescribed the terminology that was appropriate to utilise and how the concepts were defined. Thus theory and the academic discipline contributed to the practice architectures – at least in the dimensions of cultural-discursive arrangements (shaping how we talked about theory and research) – and social-political arrangements (shaping how we positioned ourselves and our work on this topic in relation to the academic community).

The fourth category represents *qualitative data*. The Finnish data consisted of focus group interviews and written narratives, and the Australian data consisted of individual interviews, focus group interviews, and observational field journals. To some extent, the data prefigured the *analysis methods*, which is the fifth category in Fig. 12.1. In our reflections, the two orders of analysis were regarded as significant for processing our qualitative data to produce satisfying answers with respect to the data and the research questions. By 'satisfying', we mean that we were able to reveal the implicit elements of our research practice which did not occur in the first order of the analysis. Data sets and analysis methods were also part of the material-economic arrangements as we physically processed our data. They were also part of the cultural-discursive arrangements as the data were collected in two languages (Finnish and English).

These categories represented the *obvious* elements of our researching practice found in our reflective narratives. The physical space (where we engaged in work) did not gain *significant* attention in our reflections, therefore the representation of our practice lacks the description of physical set-ups (although some focus was given to physical settings). This was because of the practical arrangements, when Jane relocated to a different organisation before the team's meeting in Australia 2014 and thus she participated in the researching practice through virtual communication. What we were describing was the space contributed by joint discussions, intellectual work and material resources of research data, and the physical work of analysis. However, the practice was also constituted by something more, which we regarded as implicit in our first reaction and reflections, yet important and critical with respect to our collaborative practice. Therefore, we needed to make the *less obvious* visible through further analysis.

Prefiguring Conditions of Our Research Practice

First reactions (to something obvious) are usually quite naïve and shallow, which has been the case with the painting "La trahison des images" (Picture 12.2). Magritte's painting of a pipe has agitated people to rethink the meaning of words and also people's prejudices. In this instance, Magritte is questioning people's understanding of *a pipe* (*leci n'est pas une pipe*; in English, *this is not a pipe*). It is truly a matter of interpretation of what can be regarded as *a pipe* and Magritte refers to the object in the painting as just a representation which lacks the true dimensions of the actual artefact represented. With this image, we want to illustrate that our first reactions will not always grasp the true meaning of something experienced, and our initial thoughts might be coloured by our prejudices. By processing the first reactions and with further contemplation, we could achieve a more holistic conception than we originally had. Investigation of a representation would still lack some dimensions of the natural world and we need to understand this limitation in our conclusions. With this in mind, we next turn to a discussion of the prefiguring conditions of our practice and to some of the contradictions of collaborative research.

Nature of Practice Architectures for Analytical Investigation

To make explicit the practice architectures of our research practice, we need to understand the nature of the theoretical frame. For instance, it is easy to recognise that a research team composed of four researchers constituted this practice. The research team, as a collection of human entities, can be understood as part of the material-economic arrangements of the research practice. As we were trying to identify these material-economic arrangements of our collaborative research practice, we immediately entered the dimension of cultural-discursive arrangements. Without language we could not point out or describe the objects which composed the realm of the material-economic dimension. This type of symbiosis of objects

Picture 12.2 "La trahison des images" by René Magritte (1929): *"The famous pipe. How people reproached me for it! And yet, could you stuff my pipe? No, it's just a representation, is it not? So if I had written on my picture 'This is a pipe', I'd have been lying!"* **(Magritte and Torczyner 1977, p. 71)**

and language is one example of the prefiguring nature of practice architectures. In addition to its descriptive nature, language also exposed the interpretive dimension of understanding and recognising (identifying) objects or actions within a particular research tradition (discipline). For example, our analytical approach can be described with some degree of accuracy, but to recognise it as fully in line with previously established analytical approaches is more complicated.

To describe our activities, we could use words such as applied thematic analysis (e.g., Guest et al. 2011), autoethnography (Jones 2005), bricolage in qualitative research (e.g., Denzin and Lincoln 2005), collaborative interpretation (e.g., Lund and Baker 1999), comparative analysis (Ragin 1989), critical (action) research (Carr and Kemmis 1986), grounded theory (Glaser and Strauss 1967), philosophical empirical inquiry (Kemmis et al. 2014), or 'zooming in' and 'zooming out' in practice studies (e.g., Nicolini 2012). These methodological constructs would be valid portrayals of our process (to some extent), but highlighting different aspects of our researching activities enabled and constrained different kinds of meanings and understandings. None of these words or set of words alone could explain our process fully, yet all of them elucidate something essential for our analysis. As Ludwig Wittgenstein argued in his *Philosophical Investigations* (2001/1953), words and concepts can only be understood in relation to one another. Language is a fluid structure that is intimately bound up with our everyday practices and forms of life. From this point of view, sensemaking is a matter of using words within 'language games' that we play in the course of everyday life. In most cases, "the meaning of a word is its use in the language", Wittgenstein (2001/1953, p. 20) claimed. In other words, the meaning is not what you say, but the way that you say it, and the context in which you say it; it is how you play the language games together with the other players of the game and thus construe the meanings through discussion and social interaction. This also applies to the processes of sensemaking.

Wording becomes significant when producing a representation of the practice; understandings of the representation will depend on what words we are using. Words also prefigure the understandings and perceptions of an audience in terms of what the researchers are able to discover and identify from the practice (or reality). In research practice, researchers are working as interpreters of experienced reality and they describe the phenomena to an audience with tools and methods that cannot transfer the experience of reality as it is. By using words, researchers are forming a limited interpretation or representation to describe the experience to an audience. Already the form of the interpretation shapes the understanding of how the reality is experienced and how it can be perceived. Individual members of an audience do not form the exact same perception as other members of an audience, because all the members have different kinds of personal experiences, capabilities, and knowledge. These personal attributes affect how individuals perceive the given information as representations of experiences about reality. These differing perceptions are problematic in academic environments, since we should be able to form common terms and unified understandings of reality.

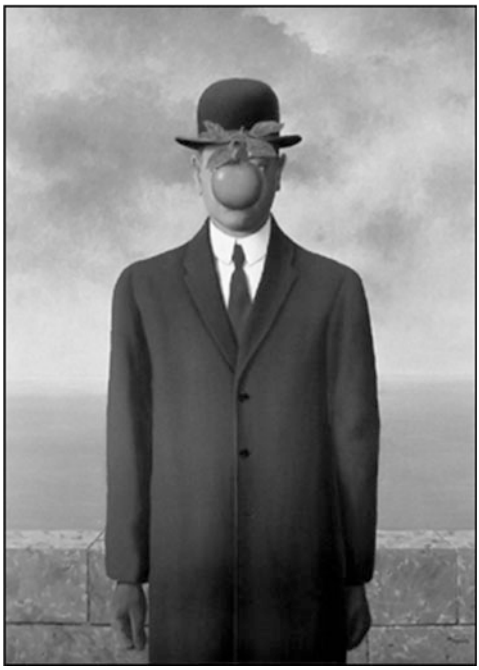
To have continuity and coherence in the usage of words in a specific context, these words need to have the recognition (acknowledgement) and agreement of the

research community or academic discipline to be utilised as terms. These cultural-discursive arrangements also become the social-political arrangements when forming a mutual agreement on the suitable description or interpretation of a practice and the actions of practice among the persons involved in the practice and the larger community of researchers. These social-political arrangements of the practice are constantly under negotiation. The participants of the practice form their language to identify, describe, interpret, and recognise the unfolding activity. During the different stages of the process, the practice is explicated in different ways. Our preconceptions of the practice will evolve during the engagement in the practice and retrospectively we might see the practice conducted differently. Participants have their individual understanding, and how the understanding is perceived by other participants and combined to reach commonly agreed thinking is prefigured by the power relations between the participants in this practice.

Power relations are particularly important from the perspective of research collaboration. Sumsion (2014) has summarised the research literature for collaborative practices of team research over the past 40 years. Based on the findings of her review, team research is widely adopted in the field of social sciences, yet it is still quite unclear how collaborative practices enable and constrain scholarly enquiries. Most definitely, researching activities benefit from having multiple persons concentrating their effort on the same subject, but equally, difficulties may arise due to differences between team members in terms of opinions, personalities, and power relationships (Sumsion 2014). However, Sumsion asks for a shift of focus from internal politics of team research to broader geopolitical-economic contexts, which she points out as an unfilled gap in the literature on team research (Sumsion 2014). Sumsion's review leads us to focus on the unstated dimensions of researchers' collaborative practice along with the obvious and already discovered arrangements, and encourages us to investigate our collaborative research practice in relation to broader themes focused on power relations.

Explicating the Implicit and Hidden

The painting "Le fils de l'homme" is an accurate metaphor for visibility (Picture 12.3). What we are able to see is easily recognisable, but we might only guess what is hidden by the visible. Investigating something that is not directly displayed is difficult in terms of research. Such investigation is always influenced by the interpretations of the researcher. However, in terms of the method of autoethnography, we were able to use our personal experience as data to investigate also the power relations of our collaborative practice, which were initially implicit. The following excerpt from Matti's reflective narrative provides a sense of concern about what was visible to us as researchers, and illustrates the kind of information that was generated during the analysis of mentoring practices:



Picture 12.3 "Le fils de l'homme" by René Magritte (1964): **"***At least it hides the face partly well, so you have the apparent face, the apple, hiding the visible but hidden, the face of the person. It's something that happens constantly. Everything we see hides another thing, we always want to see what is hidden by what we see. There is an interest in that which is hidden and which the visible does not show us. This interest can take the form of a quite intense feeling, a sort of conflict, one might say, between the visible that is hidden and the visible that is present."* **(Magritte and Torczyner 1977, p. 172)**

> *After the first phase, individual analyses were collated together and this collated material formed an outline of the practice architectures of mentoring practices…. We felt dissatisfaction, because the analyses produced a quite narrow and tilted group of responses for our theoretical frame… Data suggested or gave hints of something more, which was embedded in the responses but was not explicit after the first analysis.*

Four researchers (a group, which represented three different nationalities) collecting data from two different practice sites making sense of the collaborative practice (that emerged) depended not only on our apprehension of the cultural-discursive and material-economic arrangements, but the collaborative research practice was critically shaped by the social-political arrangements within the site of practice. These were less accessible and only became apparent in the second order of analysis when we began to ask what was not there. As Jane suggests in her self-reflection:

> *… issues of power and power asymmetries in practices are frequently hidden or invisible to the naked eye. They are often misread as 'natural' or 'taken-for-granted' relations between people, such as the patriarchal relationship that privileges behaviour that is read as 'masculine' over behaviour that is read as 'feminine'…*

During the collaborative engagement, our focus was not on the social-political arrangements as much as it was on the material-economic arrangements (research data and physical work) and cultural-discursive arrangements (theory and methodology). In our collaborative practice, the social-political arrangements were a silent component, yet just as important as the two other kinds of arrangements. In fact, meanings of power relations can be hidden in words and relations between people,

and still power relations influence the work or the *project* (the aim of the practice). To understand how power relations shape our work, we needed to make ourselves aware of the underlying meanings.

In our collaboration, we discussed the meanings of key words, since we had multiple nationalities represented and we needed to translate or explain words from Finnish to English or vice versa. However, the native English speakers were more familiar with the culture and the context where English is a language of the majority, and they could understand these silent meanings of power in words. This formed a power asymmetry between participants, affecting communication and argumentation. Besides language abilities, there were formal relationships which affected the research collaboration. In an academic environment, the hierarchy can be found in formal titles and positions. In this instance, the article on the research project of mentoring practices was planned as a part of Matti's doctoral dissertation, which set some requirements for the work, for example, Matti being designated corresponding author of the publication. While Matti was a beginning researcher and had the leading role for the publication, the group was compelled to negotiate this level of involvement; ensuring that Matti would have sufficient space in writing and yet still scaffold his growth as a beginning researcher. Supporting Matti's academic growth was a particular responsibility for Hannu as he was the main supervisor of Matti's doctoral dissertation. More broadly, this process of negotiation relates to the "rite of passage" of a doctoral student who is trying to achieve the formal recognition and membership of a research community.

A concrete example of this kind of negotiating was when a difference of opinions occurred. If Matti as a doctoral student was solely relying on his own vision of how to proceed, would this demonstrate the independence of a beginning researcher or the idiocy of opposing three experienced researchers? Or does Matti as a doctoral student perceive his supervisor's comments as the thoughts of a superior or the thoughts of a co-worker? Even though the answers to these questions might be inconclusive, the questions capture the hidden tensions for an individual doctoral student during the research project. Most often these situations were solved constructively and dialogically. On reflection, our project was shaped by each individuals' expertise, and this only became apparent when we traced the publication history, research interests, and commitment to previous research projects of each member of the team. Along with cultural and formal relations, there was a recognisable bond of academic competence between the researchers, which shaped how the members of the research team related to each other.

As we reflected on this emerging practice of collaborative research, we asked again, in relation to our narrating of the practice, 'what was missing?'; 'what were the deeply embedded arrangements that were shaping the ways in which we navigated a shared analytical practice?' Laurette captures the missing in the following way:

> *In the collaborative data analysis space, planning what we did and when we did it, how we spoke and when we spoke it, influenced the social and political understandings of us as researchers in a working team; and exposed the social-political arrangements and traditions implicit in the data being analysed. Thus, as we attempted to map how we were making*

> *sense of what was being seen in the data we collected and in the stories of data collection, we slowly and simultaneously arrived at the inescapable. That is, that our discrete discernment of the social-political arrangements of mentoring (the subject of our collective inquiry) was intimately connected to our conscious apprehension of the social-political arrangements which were conditioning our doings and sayings as researchers investigating the thing that we ourselves were experiencing (mentoring, but for research publication).*

Here the personal and the social are intertwined and not easily severed by the simplification of the explicit. This difficulty is present with team research as Sumsion's (2014) literature review reveals. Collaborative research practice is a practice of contradictions; Sumsion's review summarises benefits of collaborative practices that produce, for example, analytical richness and rigour, yet also points to examples that lead to fragmented interpretations, creating illusions of greater understanding. Our reflexive method was dialogical and constructivist and it was difficult to say whose effort or which ideas were neglected or processed. If a personal opinion was expressed, then it was elaborated by others; either overruled, reconstructed, or supplemented. The personal had become social. What can be said about our practice is that it was not only enabled and constrained by the micro-politics of our team, but it was enabled and constrained by the relations to and within the wider theoretical frame (the theory of practice architectures); the methodological approaches we adopted (qualitative analysis and inductive and abductive reasoning); and also 'the industry of research publishing', which means that there is a high pressure for academics to produce many publications, especially in international journals. How did we realise this? It was the moment when we moved closer to the discovery of the "unknown landscapes", or as Hannu remembers it:

> *I also remember feelings of dissatisfaction after the content analysis. Then we started to think what was still missing. What is somewhere there beyond the practices, which we did not see? We had to go somewhere beyond the actual data and ask each other and ourselves what was missing. Then we started a discussion on another level. I think we actually created new data simultaneously when we studied the outcomes of the first order analysis. This data was our discussions as we strove towards something unknown. I think that was the most important step: to start the journey together to some unknown landscapes, so as to find the hidden and not-spoken structures or constraints which prefigure the different practices of mentoring in Finland and in Australia.*

In this chapter, we have drawn on the 'created and discovered data' that we generated through our collaborative research practices (in our discussions and reflection in action and after action). What then is to be said about the practice architectures of a collaborative research practice?

Conclusions

Some practice architectures of our collaborative practice were more obvious to us than others in the first order of analysis (illustrated in Fig. 12.2). Social-political arrangements were the least obvious, even though they were critical components of

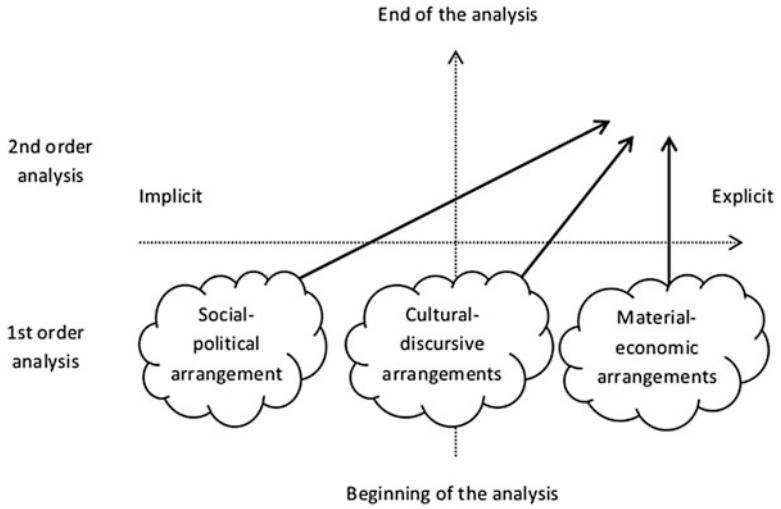


Fig. 12.2 Two orders of the analysis (From Pennanen et al. (2015, p. 36). Reprinted with permission)

the practice architectures, as were the other two kinds of arrangement. The distinctiveness of the arrangements was also a difficulty for the analysis; three kinds of arrangements are identified in the theory of practice architectures and for analytic purposes we needed to make a judgement about which elements belonged in which category. How to recognise different elements as of one kind of arrangement or another (according to the theory and in reality) when they occur in an intertwined and enmeshed ensemble is an issue that every researcher (using this theoretical frame) needs to evaluate and solve in respect of their study.

On the basis of our autoethnographic investigation, we see that theories (such as theories of practice and theories of other phenomena which we encounter in our lives) and research methodologies are practice architectures themselves. The use of certain theories and research methodologies prefigures what is possible or desirable in research. This includes

1. how to speak and write; how to conceptualise happenings, actions and activities, or power and solidarity relations that take place in social reality, for example, in education (cultural-discursive arrangements);
2. what and how to do, and how to act and behave; what material operations are followed in collecting data or analysing it (material-economic arrangements); and
3. whose opinions, views, or previous work, either within the research group or outside of it, should be taken into account; whose theories or methods we want to use; or contrariwise, whose ideas we just skip or neglect, who are the ones with whom we feel some sense of solidarity, and what are the 'academic tribes' (cf. Becher and Trowler 2001) we want to join and be initiated into through initiation rituals such as public defence of a doctoral thesis (social-political arrangements).

All these practice architectures of research seem to have much in common with what Thomas S. Kuhn (2012/1962) calls 'research paradigms'. The outcomes of collaborative research are produced with action and decisions; and also in some instances, just coincidentally.

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Chapter 13
Coming to 'Practice Architectures': A Genealogy of the Theory

Stephen Kemmis and Kathleen Mahon

Abstract This chapter provides an account, from the perspective of one of the authors of the theory of practice architectures, of how the theory came about and has evolved. The theory was first articulated as the 'theory of practice architectures' by Stephen Kemmis and Peter Grootenboer in 2008 in the book *Enabling Praxis: Challenges for Education*. However, it was many years in the making before 2008, and it has continued to be refined since then through Kemmis and Grootenboer's engagement in research and conversation with other scholars. The narrative presented here provides insights into many of the theory's key influences, explaining how and why some of its central assertions and ideas have emerged. Thus the chapter builds on explanations of the theory presented in this book and elsewhere.

Like all substantive theories, the theory of practice architectures has its own narrative. It did not come from nowhere. It is the product of, and continues to be shaped by, many deliberations, conversations, research collaborations, and theoretical influences. If we are not to take the theory itself for granted, it is helpful to know a little of its history, its influences, and perhaps even some of its internal tensions. Those readers who are new to academic literature and research might also find these things useful for appreciating how substantive theories, as accounts of social reality, are developed – since new theories do not ordinarily appear to their authors, complete and fully-fledged, at a single stroke.

In this chapter, we present a narrative of the theory's development as lived by one of the theory's key architects and the first author of this chapter: Stephen Kemmis. We have chosen to write it as a conversation, albeit a contrived one, in the form of questions and answers, firstly because much of the content of the text emerged through

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multiple conversations between us during Kathleen's doctoral candidature (Stephen was Kathleen's supervisor), and afterwards in the production of this book. Secondly, a conversational form allows us to offer a contemplative rather than a comprehensive or definitive telling (if such a thing were possible), and to capture some of the complexities of the theory. Readers, therefore, ought to bear in mind that not all influences, twists, and turns in the theory's development are represented in this account, and that other architects of the theory might tell a different story. We begin the conversation by discussing earlier influences, and then shift to some of the ways in which the theory has evolved since the publication of Kemmis and Grootenboer (2008), where the theory was first articulated as the 'theory of practice architectures'.

Note that we have used footnotes for referencing instead of following conventions used elsewhere in this book so that the text is more in keeping with a conversation. The chapter is intended to be read after, or in conjunction with, Chapter 1 of this book (Mahon et al. 2017).

Kathleen: My first encounter with the theory of practice architectures was the Kemmis and Grootenboer chapter[1] in the *Enabling Praxis*[2] book that you produced with your PEP colleagues. That was the first formulation of *the theory of practice architectures*, as the theory of practice architectures, right?

Stephen: Yes, that's right. That was a very productive collaboration – which continues today, by the way, with some new participants. My work with Peter Grootenboer was part of a broader collaboration involving academics at CSU,[3] who, with scholars from England, Norway, Sweden, Finland, and the Netherlands, formed the international collaborative project, Pedagogy Education and Praxis – 'PEP' for short, as you know. The PEP collaboration led to the publication of *Enabling Praxis: Challenges for Education*, the first book in the Pedagogy, Education and Praxis series produced by the International PEP Network. The *Enabling Praxis* book examined the notions of 'praxis', 'education', and 'pedagogy' as understood in different educational and research traditions. Peter and I looked at praxis and praxis development within educational contexts from the perspective of how practices and praxis are shaped intersubjectively. The theory of practice architectures, as articulated in that Kemmis and Grootenboer chapter, gradually took shape through discussions in the critical community of PEP, with my Charles Sturt University colleagues.

Kathleen: I gather that developing the theory of practice architectures wasn't just a theoretical exercise.

[1] Kemmis and Grootenboer (2008).

[2] Kemmis and Smith (Eds.) (2008).

[3] The Charles Sturt University (CSU) team working on the book included co-editors and authors Stephen Kemmis and Tracey Smith, along with CSU authors William Adlong, Roslin Brennan Kemmis, Christine Edwards-Groves, Deana Gray, Peter Grootenboer, Ian Hardy, Helen Russell, and Jane Wilkinson.

Stephen: No, it wasn't. It was very much bound up with our collaborative self-inquiry work, that is, with our colleagues, regarding our own practices as academics, and our attempts to understand the relationship between our practices and the conditions that characterised our educational setting. It was also linked to a broader moral and political imperative to understand and address the expanding ill-effects on society of neoliberalism and managerialism, including increasing pressures on educational institutions and practitioners, the creation and perpetuation of social injustices, and threats to sustainable living and people's wellbeing.

Kathleen: So there was a practical and ethical reason for developing the theory?

Stephen: Very much so. We believed that an account of practice that allowed examination of how global phenomena are impacting on and produced by everyday practices would serve an important function in these circumstances, at this historical moment.

Kathleen: Reading some of your earlier work though, it seems that you had been thinking about these things, and playing around with ideas about practice and praxis for a while.

Stephen: That's true. You could probably see some of the ideas embedded in the theory of practice architectures in my earlier writings. One form of the theory was a theory about student learning published in 1977[4]: a theory about how dynamical cognitive structures (d-structures) shape and are shaped by functional structures (f-structures) we encounter in the world. I was thinking at the time about how students learn from computer assisted learning (CAL) packages. The initial form of the theory of d-structures and f-structures came to me when I was in a train from London to Norwich, after a day in London, interviewing for the *Understanding Computer Assisted Learning* independent evaluation of the British National Programme for Computer Assisted Learning.[5] I was musing about how people learn things as the train passed the town of Diss, where there was a view of the water (a mere or lake on the River Waveney), and a beach with little boats drawn up on it. 'How do people learn to row a dinghy?' I wondered. And then I began to see how the dinghy plays an active role in 'teaching' someone to row it. When you put the oars in the rowlocks, you discover you can't sit facing in the direction you want to go. The dinghy 'teaches' you to sit in the middle of the boat with your back to the bow. And when you try to pull the oars, the oars 'teach' you to hold them with the concave face backward, so you can get a purchase on the water, and so the oars don't slip out of the water. So I began setting out to find the kinds of functional structures (f-structures), like the location of the rowlocks on the side of the dinghy and the shape of the oars, which shaped the way students

[4] Kemmis, with Atkin and Wright (1977).

[5] Directed by Barry MacDonald, and running from 1974 to 1977. The principal researchers in the project were Barry, David Jenkins, David Tawney and myself (I worked on the evaluation 1975–1977), although Rob Walker and Rod Atkin also sometimes worked with us.

could interact with computer-assisted learning set-ups in the CAL projects I was evaluating in the National Programme. I identified f-structures built into the pedagogy designed into the software, in the hardware (how students could interact with the computer), in the subject-matter being taught (sequences of topics being studied in physics, for example), and in the milieu in which the student found her- or himself (like the location of the room, the layout of the equipment, the arrangements of chairs and desks, and so on). And I tried to show how all of these came into play in shaping students' learning – what I would now call their learning practices, which leave 'learning' as their trace.

In the theory of practice architectures, the notions of 'dynamical structures' and 'functional structures' do not survive, but the idea that practices shape and are shaped by arrangements is still absolutely central. At the time I developed the theory of d-structures and f-structures, I was an educational psychologist much shaped by theoretical discourses I learned from Piaget[6] and some post-Piagetians, including Jack Easley and Klaus Witz, from whom I took courses when I was at the University of Illinois at Urbana-Champaign studying for my doctorate. I was a committed 'interactionist' studying learning through post-Piagetian eyes.

In terms of understanding learning, my thinking has changed significantly over the years. That happens when you work with so many different people in different contexts, and when you encounter a range of psychological, social, and cultural theories that challenge your views, as I have. I had to teach myself sociology and social theory to understand how the world of the social is shaped by things beyond the individual. Giddens[7] was one of the authors who influenced me. I was also much influenced by the reproduction theory of Bourdieu and Passeron[8] and others. Other profound influences were Habermas,[9] Marx,[10] Schwab,[11] Aristotle,[12] MacIntyre,[13] and Schatzki[14]; and, in some ways, Foucault[15] and various poststructuralists, including,

[6] In my view, Piaget is best described as an interactionist. His interactionism is evident (but not named as such) in such works as his (1971) *Biology and Knowledge* and (1973) *To Understand Is to Invent.*

[7] For example, Giddens (1984).

[8] Bourdieu and Passeron (1977).

[9] At first, Habermas (1972, 1974), and then others including Habermas (1979, 1984, 1987a, b, 1996, 2003a, b).

[10] Especially the idea of practice (and revolutionary praxis) sketched in the *Theses on Feuerbach* (that first appeared in English in 1938 in *The German Ideology*, published by Lawrence and Wishart).

[11] Crucially, Schwab (1969).

[12] Especially in his *Nichomachean Ethics* (Bartlett and Collins 2011) and *The Politics* (Sinclair 1962).

[13] For example, MacIntyre (1981, 1988, 1990).

[14] For example, Schatzki (1996, 2002, 2010).

[15] For example, Foucault (1978).

although I disagreed with them on many things, Lyotard,[16] Derrida[17] and Baudrillard.[18]

Kathleen: So which of these was most influential in terms of your earlier thinking about practice?

Stephen: I'd have to say that the critical theory of Marx and of the Frankfurt School,[19] especially Habermas,[20] was particularly influential. Marx drew my attention to the profound insight that, while histories make practices, at the same time, practices make histories. This partly explains the focus in the theory of practice architectures on the consequences and history-making dimensions of practice, or more precisely, praxis.

Kathleen: And Habermas?

Stephen: Habermas's notion of intersubjectivity has been very important, as has his notion of the 'social media' of language, work, and power. These influenced my understandings of language, work, and power as dimensions in which we encounter one another and the world, and through which we understand each other, our social world, and ourselves. In the theory of practice architectures, these dimensions appear as three dimensions of intersubjectivity in which we encounter one another in semantic space, physical space-time, and social space.

Kathleen: So where do Aristotle and MacIntyre fit in?

Stephen: I began to study Aristotle seriously during my doctoral studies at the University of Illinois in the 1970s. In the *Ethics*, Aristotle had distinguished technical (or instrumental, or means-ends) reasoning (aimed at making things, using know-how) from practical reasoning (aimed at choosing what to do at any particular moment, aiming to do what should be done), and both from theoretical reasoning (contemplation about the nature of things, aimed at knowledge of the truth). Schwab[21] drew on Aristotle to develop his idea of *the practical* and *practical deliberation* – both crucially important in his conception of what curriculum is: a matter of deciding what it is right to do in some particular educational situation, where a teacher must make choices about what to do in relation to a particular pupil, in relation to some particular subject-matter, and in some particular milieu. It took me some time to deeply understand the notion that making these choices is always a *practical* matter about what ought to be done, and not simply a *technical* question about *how* to do things – although practical choices ordi-

[16] Lyotard (1984).

[17] Derrida (1978).

[18] Baudrillard (1983).

[19] For example Jay (1973) and Wiggershaus (1994).

[20] Habermas (1972, 1974, 1979, 1984, 1987a, b, 1992, 1996, 2003a, b).

[21] Schwab (1969).

narily also involve knowing how to use the appropriate means to get to a desired end. That encounter with Schwab was to be foundational to my views about praxis. Aristotle's distinctions between technical and practical and theoretical reason were also crucial in Habermas's theory of knowledge-constitutive interests in which he identifies different kinds of sciences associated with each: empirical-analytic science about the natural world; hermeneutic (or interpretive) science about cultures, history, and the arts, for example; and critical sciences aimed at emancipating people from misconceptions about the world and how to live in it. Aristotle was also important for me later, when I worked with Shirley Grundy on Aristotle in the development of a theory of action research in the late 1970s and early 1980s.

Aristotle was also crucial in the work of MacIntyre, introduced to me by Wilfred Carr. MacIntyre[22] influenced my understanding of practice, but it also introduced me to a particular way of doing philosophy, i.e., historically aware philosophy. This reinforced the idea for me that practices, including the practice of philosophy itself, are always a response to the historical conditions of the time. MacIntyre also pointed out that practices are frequently in a kind of tension with institutions, so that the 'internal goods' of a practice can be put under threat by the 'external goods' of money, power, and status that play such a role in the political life of institutions. MacIntyre's[23] history and exegeses of moral theory also informed my views on praxis, by the way, as did Richard Bernstein's lucid account of praxis in his book *Praxis and Action.*[24]

Kathleen: You mentioned Giddens as well…

Stephen: Before we come to Giddens, I need to say something about Wilfred Carr. Wilfred has had a huge influence on my thinking since the end of the 1970s and especially into the early 1980s as we worked together writing and re-writing our book *Becoming Critical.*[25] On the one side, we reached into 'the practical' as interpreted through a tradition from Aristotle to Schwab and MacIntyre; on the other, we engaged with the Marxian tradition (especially the cultural Marxists like Antonio Gramsci[26] and Louis Althusser[27]) and Habermas's[28] critique of positivistic and interpretive (hermeneutic) social science. This brought us to an understanding that critical social science is not merely negative, but also practical and committed – committed to informing action to

[22] MacIntyre (1981).

[23] MacIntyre (1981, 1988, 1990).

[24] Bernstein (1971).

[25] *Becoming critical: Education, knowledge and action research* by Carr and Kemmis (1986).

[26] For example, Gramsci (1971).

[27] For example, Althusser (1971).

[28] Habermas (1972, 1974).

remake the world to overcome irrationality, unsustainability, and injustice. Our dialogue through the years has continued to deepen our understanding of action in history, both in the short term, to be seen in the immediate consequences of actions, and in the long term, in the formation, deformation, and transformation of traditions.

Kathleen: And so, Giddens? You've mentioned to me before that he influenced your work in the 1980s.

Stephen: Mm, Giddens. His theory of structuration[29] was pretty important[30] to me then. I was taken by his ideas about agency and structure, although at the time of encountering Giddens's work, I was thinking about it from a cognitive perspective. My journey as an educational theorist is probably relevant here. I turned myself from a psychologist into a social theorist through encounters with social theory and critical theory. This transition has meant working particularly with the tension between the individual and the social as I have changed focus from the cognitive to the collective and the corporeal in human activity.

Kathleen: Not an easy transition but a generative one, would you say?

Stephen: Absolutely. So there are parallels between Giddens's three domains of social structure – economic, political and cultural – and the categories identified in the theory of practice architectures of *cultural*-discursive, material-*economic*, and social-*political* arrangements.

Oh by the way, my exposure to reproduction theory through the work of Bourdieu and Passeron,[31] Apple,[32] and Giroux[33] has been pretty important too. Reproduction theory was, to me, a theory that could explain the formation and transformation of education through practice in history.

David Hamilton's work in the 1970s and 1980s was also critical for me. David's 1989 book that I suggested you read when you were doing your thesis, *Towards a Theory of Schooling*,[34] presents historical 'case studies' of schooling at several moments of major transformation in schools and schooling, beginning in the 1500s, and ending in the first part of the twentieth century. At each stage, David describes major cultural, economic, and social trends of the period to show how new forms of schools and schooling arose from and, in turn, contributed to, contemporary historical circumstances. In response to David's book, I wrote a manuscript, never properly published, called *Curriculum, Contestation and Change: Essays on Education*. I shared the manuscript with David and Wilfred, as well as with students I was teaching

[29] Giddens (1984).

[30] See Kemmis 1990.

[31] Bourdieu and Passeron (1977).

[32] Apple (1979, 1981).

[33] Giroux (1981, 1983).

[34] Reissued in 2013 by Routledge in the 'Routledge Revivals' series.

at Deakin University at the time. In the manuscript, I outlined a theory connecting the cultural, economic, and social domains, through the Habermasian[35] social media of language, work, and power, to the development of individuals' cognitive understandings, skills, and values. The manuscript also drew on reproduction theory, proposing a dialectical theory of reproduction and transformation in which cultures, economies, and societies are simultaneously reproduced and transformed in these three domains. This theoretical framework was, in many respects, an early sketch of the theory of practice architectures. So: I was profoundly influenced by David's careful treatment of the cultural, the economic, and the political trends at particular turning points in societies at different times in history, and how these three sets of conditions were also conditions for the rise of new configurations in education, including in the (literal) architecture of schools.

Kathleen: One of the very striking things about the theory of practice architectures is its site ontological perspective. I know that Ted Schatzki has had a major influence on your thinking and that of your co-authors in this respect.

Stephen: Schatzki's notion of 'site ontologies'[36] has been the most significant and most recent influence on my conception of practice, I'd have to say. A site ontological perspective allows proper justice to be done to the social, and the material and embodiment in accounts of practice, and allows arrangements to be conceptualised as (pre-) conditions for practice. Just as Marx materialised Hegel's idealist notion of human progress through history by writing a history of capitalism (Marx's *Capital* 1992a, b, 1993), so, in my view, Schatzki[37] materialised epistemological notions of practice by elaborating an ontological perspective. I think my – our – profound debts to Schatzki are evident in Chapter 1 of this volume, where we lay out the theory of practice architectures using several of Schatzki's notions – in particular, the notions that practices are prefigured, and that they are bundled together with arrangements, and that they occur in sites in which specific kinds of arrangements are found.

Kathleen: Do you see there being tensions between a Schatzkian view of practice and, say, an Aristotelian perspective?

Stephen: I do. There is particularly a tension for me between Aristotle's notion of practical deliberation and praxis, which necessarily involves seeing things from the perspective of the human agent, who must choose what to do under particular circumstances, and which thus *seems* more 'subjective' in its perspective, and, on the other hand, a Schatzkian/Heideggerian view of practice which *seems* more 'exter-

[35] Habermas (1974).

[36] Schatzki (2002).

[37] Schatzki (1996, 2002, 2010).

nal', even 'objective' – though I don't think these terms are right. I think the polarity which seems to be implied here – between the 'subjective' and the 'objective' – is false. The two perspectives meet in the domain of the *intersubjective.* I think Schatzki's view similarly obliterates the dualism of subjective-objective, in his particular way, which is the insistence on the primacy of the ontological view of practice, in which speaking-thinking-doing corporeal bodies act in a material world, engaging with arrangements of things that are to be found in sites. I find myself negotiating these tensions between the subjective and the objective, between the psychological and the social, between the epistemological and the ontological, all the time. These false dualisms are categories laid down long ago in my past, always threatening to re-emerge and to disrupt the primacy, for me, of the *intersubjective*. Negotiating such tensions accounts for some of the shifts in my thinking over time. The power of the intersubjective came home to me with special force as I came to understand Habermas's critique of 'the philosophy of the subject'.[38] In Habermas's critique, objectivism and subjectivism share the view that truth consists in propositions comprehended in minds of human subjects (hence, 'the philosophy of the subject'), like images on a retina, rather than in the conversations between us, in which we give and evaluate reasons, and in which justifications stand or fall on the basis of our reasoning together.

Nevertheless, I am also acutely conscious that, as human beings, we are moral agents, choosing to act as we do, and (I hope) doing our best to act in the world in ways that will be for the good of humankind. As such, we share, or should strive to share, the aspirations of the Stoic philosopher and Roman Emperor Marcus Aurelius[39] whose *Meditations* reveal his relentless efforts to formulate rules of thumb that could guide how he lived his life, and how he acted every day in deliberating about what to do. I was deeply influenced by Pierre Hadot's *The Inner Citadel*,[40] which reveals how Marcus Aurelius's *Meditations* were Stoic spiritual exercises which he engaged in every day, contemplating topics in logic or dialectics, physics, and ethics, so he could learn more about how to speak and think well, to act well in the physical world, and to relate well to others. Hadot shows how this requires three disciplines taught by the Stoics. The first is the discipline of attention: trying to see things as they are; once upon a time, one would have said 'objectively', trying to avoid being misled by 'common sense', or superstition or tradition, or self-interest, for example. The second is the discipline of desire, according to which one aimed to avoid becoming too attached to things in the physical world, like food or sex. The third

[38] For example, in Habermas (1987b).

[39] 121-180 AD; see Hadot (1998).

[40] Hadot (1998).

is the discipline of action, according to which one aimed always to act for the good of humankind. I think these are still good guides for living a good life, perhaps *the* good life. They are the sorts of things one must have in mind in practical deliberation about what to do, for *praxis*. The power of the intersubjective shapes us to see and think about the world in certain ways, gives us particular kinds of historical circumstances in which we must act, and places us in webs of relationships of solidarity and power which will shape how we act, and all of these will be reshaped by how we act. Nevertheless, it still falls to each of us to be the ones who act, unique in our actions and our responsibilities for them, and in this way exactly like all other people who are also moral agents.

Kathleen: It's interesting that you should mention shifts in thinking a moment ago. One of the things I was conscious of when using the theory of practice architectures in my PhD research, was that I was encountering the theory of practice architectures as a living, evolving theory. And not only in scholarly literature. I was part of the community that was developing the theory and so it was being spoken about and reconceptualised around me. You know, just when I thought I understood aspects of the theory, it changed. The theory to me is vital and responsive, as theories about practice must be, I suppose, given that practices and our understanding of practices evolve. In a way, I felt privileged to be involved in such conversations. The fact that the theory was evolving was both tricky, since I was using an 'unstable lens', and generative, because I was constantly rethinking my position in relation to the emerging ideas.

Stephen: Yes, the theory remains a 'work-in-progress'. Since the publication of the Kemmis and Grootenboer chapter in 2008, I have continued to engage with scholarly literature and in vibrant discussions with PEP researchers. And I have continued to work on the theory in writing collaborations with various people.[41] I've also continued to engage in inquiry of the kind that Rebecca Mutton and I called '*philosophical empirical inquiry*',[42] where empirical material from the real world of practice in educational settings has in a sense been speaking back to the theory, holding the theory to account, prompting us to ask different kinds of questions about practice. So the ideas continue to evolve as we put the theory to work to understand and analyse different practical situations.

[41] The collaborations being referred to here are numerous, and have been instrumental in shaping revised articulations of the theory. See for example, Kemmis et al. (2014b); Kemmis et al. (2012); Kemmis et al. (2014a); Kemmis and Heikkinen (2012); Kemmis and Brennan Kemmis (2014); Kemmis and Mutton (2012); Rönnerman and Kemmis (2016); and a variety of conference presentations in Australia and Europe.

[42] See Kemmis and Mutton (2012) and Kemmis et al. (2014b).

Kathleen: Is that how notions such as 'enmeshment' and 'practice landscapes', have come to be incorporated into the theory, because I notice that they weren't in the Kemmis and Grootenboer chapter?

Stephen: Certainly. Our philosophical-empirical inquiry has led to new ways of thinking about practices. The theory of ecologies of practices is a good example. The theory of practice architectures in its original form did not quite capture the kinds of interdependencies between practices that Rebecca Mutton and I observed in an inquiry into new, emerging practices of Education for Sustainability.[43] In our empirical evidence, we noticed that certain practices appeared to be ecologically related to each other, so that practices of learning how to germinate seeds and nurture seedlings depended, for example, on earlier practices of building shade-houses in which students could do the work of growing indigenous plants to be planted in local revegetation projects. Together with colleagues Jane Wilkinson, Christine Edwards-Groves, Ian Hardy, Peter Grootenboer, and Laurette Bristol, who worked with me on the 2010–2012 Australian Research Council-funded project 'Leading and Learning: Developing ecologies of educational practice', we subsequently developed these ideas further, generating the theory of *ecologies of practices* to accommodate this more nuanced understanding of practice.[44] The notion of ecologies of practices extended the theory of practice architectures and opened up new lines of inquiry into practice for us. It has also given us a useful language for describing very complex relationships.

Kathleen: And the notion of being 'stirred into' practices?

Stephen: Yes. Despite adopting an overarching ontological perspective on practices and social reality, my colleagues and I became interested in how people come to know how to go on in a practice, and how learning happens – a question of enduring interest for many practice theorists who adopt a more epistemological, rather than ontological, perspective on practices. This was something that Peter and I had not explicitly tackled in our 2008 chapter.

Kathleen: That's an inevitable line of inquiry, I guess, given your interests in education, pedagogy, and praxis development.

Stephen: Mmm. The notion of being stirred into practices[45] emerged from considering epistemological questions in relation to real examples of practice. We were intrigued by the empirical evidence of people trying out new ways of doing things as they successively 'homed in' on forms of the practice that were increasingly comprehensible to others as cases of such-and-such a kind of practice (in semantic space), increasingly coordinated with others' actions in the conduct of the practice (in phys-

[43] Kemmis and Mutton (2012).

[44] See Kemmis et al. (2012) and Kemmis et al. (2014b).

[45] Kemmis et al. (2012); see also Kemmis et al. (2014b).

Table 13.1 Individual and extra-individual realms mutually-constituted through practice

INDIVIDUAL	**Mediated through generic practices**	**In collectively-shaped social media**	**EXTRA-INDIVIDUAL**
Knowledge and identity			**Structures**
Understandings and self-understandings	***Communication ('Sayings')***	*Language*	Cultural-discursive (languages, discourses)
Skills, capacities	***Production ('Doings')***	*Work*	Material-economic (physical, natural worlds)
Solidarities, values, emotions	***Social connection ('Relatings')***	*Power*	Social-political (lifeworlds, systems)

ical space-time), and increasingly appropriate in terms of ways of relating to others in the site (in social space). Of course, we were also influenced by Wittgenstein's[46] idea of people being initiated into language games.

Kathleen: It seems to me that some of the key conceptual and semantic changes and theoretical tweaking in the theory of practice architectures are immediately obvious if you compare diagrams representing central ideas of the theory of practice architectures, especially the table[47] on page 51 of the Kemmis and Grootenboer chapter and the most recent diagram[48] of the theory of practice architectures in your *Changing Practices, Changing Education* book written with Jane Wilkinson, Christine Edwards-Groves, Ian Hardy, Peter Grootenboer and Laurette Bristol.

For instance, Table 13.1 uses the language of 'individual and extra-individual realms'. These terms don't appear in Fig. 13.1. That seems to have all but disappeared from later accounts of the theory of practice architectures, hasn't it?

Stephen: Yes, I suppose it has… Earlier, I used the expression 'extra-individual' rather than 'social' to avoid the invisibility and taken-for-granted-ness of the word 'social' in the simple opposition 'individual-social' (which plays to the sensibilities of psychologists on the one hand, and sociologists, on the other). Using the term 'extra-individual' seemed to me to assert that what came under that category could not be reduced to properties of individual subjects, but stood somehow 'between' people.

[46] Wittgenstein (1957).

[47] Included here as Table 13.1. From Kemmis and Grootenboer 2008, p. 51. Copyright 2008 by Sense. Reprinted with permission of Sense.

[48] Shown here as Figure 13.1. From Kemmis et al. (2014b, Chapter 2, 'Praxis, practice and practice architectures', p. 38). Copyright 2014 by Springer Science+Business Media Singapore. Reprinted with permission of Springer.

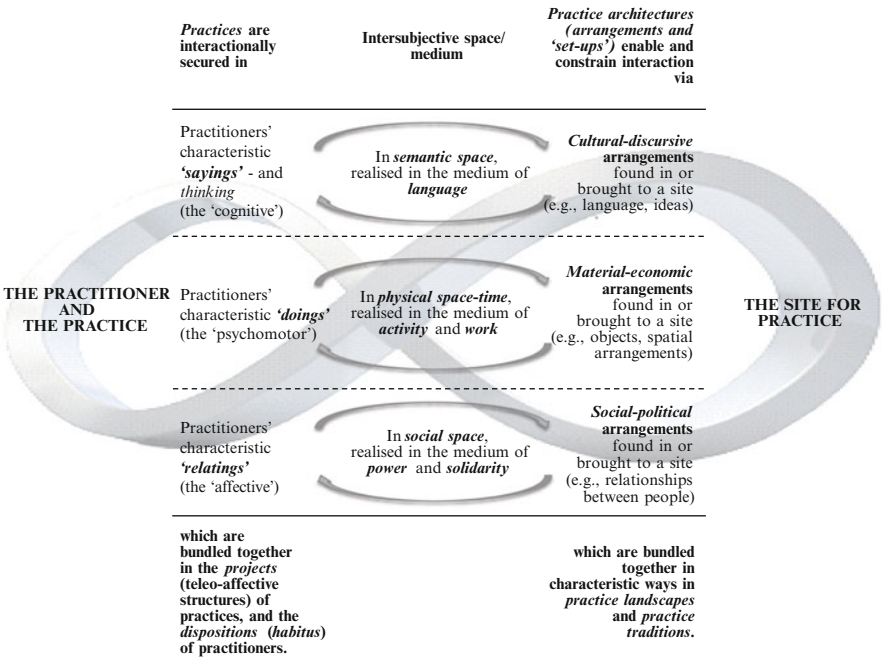

Fig. 13.1 Theory of practice and practice architectures

Later, our emphasis on the intersubjective – the domains where people encounter one another as people, in semantic space, in physical space-time, and in social space – improved significantly on the more ambiguous and less substantive notion of the 'extra-individual'.

You'll also note, by the way, that the term 'structure' at the top of the right column in Table 13.1 has also disappeared in Fig. 13.1, particularly as I thought through the implications of Schatzki's critique of the notion 'structure' as it appeared in the work of Bourdieu.[49] The key point that comes from that critique is that the social world is *not* populated by hypothetical entities (like 'structures' related to such things as gender or class, or 'fields' like 'the academic field', or 'journalism') that are alleged somehow to channel people's actions and practices, but rather that the channelling is done by actual arrangements that are to be found in real sites where people interact: cultural-discursive arrangements built into the language they use, material-economic arrangements that enable and constrain their activities and work, and social-political arrangements that enable and constrain the way people can relate to one another in the site, in terms of solidarity with and belonging to one another, and in terms of the power relations that enable and constrain their individual and collective possibilities for

[49] Schatzki (1987, 1997).

action. In short, we do away with an abstract notion of social structure, like the abstract structures of class or gender, and replace it with a notion of what is present in or brought to a site – in the language, the work and activity, and the relations of solidarity and power to be found there. Of course, these practice architectures may occur in varying forms across many sites, giving the illusion that a more or less unitary or coherent 'social structure' regulates people and practices across sites. On the ontological perspective, however, we do not need to resort to such hypostatised entities, but rather search for what arrangements *make their presence felt* in a site, thus making practices possible, and holding them in place – though we should also note that practices vary constantly to assimilate and to accommodate to changing circumstances, because arrangements are never perfectly repeated, and may not even continue to exist in a site, even though people might sometimes act as if they were still present.

Kathleen: Thinking about where the theory is up to now, do you have any reservations, or niggling tensions about any aspects of the theory of practice architectures?

Stephen: Perhaps some of the language, including the expression 'practice architectures' itself.

Kathleen: It is a curious choice of terminology in a way. Why 'practice architectures'?

Stephen: Well, Peter and I wanted a term to refer to these different types of arrangements – you know, cultural-discursive arrangements, material-economic arrangements, and social-political arrangements – as bundled together, a term that was suggestive of arrangements being *organised* and produced by practices and the *organising* of practices, and of holding practices in place. We recalled Wenger's notion of "learning architectures",[50] and thought the notion could be generalised from 'learning' to 'practices' more widely. Adopting the metaphor of 'architectures', however, wasn't entirely without reservation. The word had the potential to capture the senses of being organised and organising, and being designed and designing, that we were hoping to convey, but there was the risk of the term 'architectures' being (mis)interpreted as implying fixed structures entirely made by human beings – when, in reality, they vary and some (like weather, or gravity) occur by happenstance, not in a direct sense by human choice. We stuck with 'practice architectures' as mostly what we wanted to convey, but very deliberately and repeatedly pointed out the dynamic and changing nature of practice architectures. I don't know if you remember the photograph on the cover of the *Enabling Praxis* book? That was used to represent what we had in mind. It is a picture of a maze at Beaufort Castle, in England, that has been designed and grown over many years to con-

[50] Wenger (1998, pp. 230–40).

Fig. 13.2 A maze: a metaphor for practice architectures that constrain and enable practices (Photograph reprinted with the permission of Ashcombe Maze and Lavender Gardens, Shoreham, Victoria, Australia)

strain and enable the people who go through it. That image seemed to me to convey a sense of this lovely dialectic in the unfolding of history, with people's practices being constrained and enabled by the things we have designed and constructed. Figure 13.2 is a photo of a different maze: the Hedge Maze at Ashcombe Maze and Lavender Gardens in Shoreham, Victoria, Australia. Of course people construct mazes for fun. Constructing a hospital or a school is quite a different matter.

Another niggle is that the word *'economic'*, as in 'material-*economic* arrangements', also makes me a bit uncomfortable. 'Economic' as a descriptor doesn't necessarily align well with elements of a social site that encompass the natural physical environment. Aspects of the natural physical environment that are relevant to a practice are part of the material-economic arrangements of that practice according to the theory. Yet describing features of the natural environment, such as mountains, rivers, weather conditions…

Kathleen: Which are so relevant, say, in outdoor education practices…

Stephen: Yes, describing such things as being part of the material-economic arrangements for a practice does sound a little odd. Kemmis and Grootenboer (Peter and I) accepted the term as problematic but thought

it important because the 'economic' signals not only the intersubjective medium of *activity* in general, but also the medium of *work* in organisations. It is important to note, by the way, that 'the economy' is also a social phenomenon, and thus properly understood as part of the social-political arrangements at a site. The 'economic' part of the 'material-economic' is the part that is composed in physical space-time, of objects (like consumer goods) and their relations (like being purchased in exchange for money). Like money, many objects in an economy circulate in real space and time.

Kathleen: As someone for whom the natural environment and place has been such a key part of my professional life, it is helpful to hear you acknowledge that. It's so tricky, isn't it, to find the words that say what you want to say, when, as the theory of practice architectures suggests, the languages at our disposal both constrain and enable what we can think and say? I guess the important thing is to be aware of what the words do, how words shape us, our thinking and so on, as we form them. The theory helps us to do that in my view, even if there are limitations in terms of how well words, and diagrams for that matter, can capture the nuanced complexities of our social realities. The theory of practice architectures comes as close to anything I have encountered or could imagine regarding how professional practice is constituted and conditioned, especially in education.

Stephen: I'm glad. Thinking about the changing diagrams we mentioned earlier: the theory of practice architectures has, for me, become part of the bigger picture of my life's work as a professor of education. In particular, it relates to what I think education *is*, and how it works, descriptively, as a process, and, normatively, what it means for individuals and for whole societies.

In *Changing Practice, Changing Education*,[51] my co-authors and I defined education in this way:

> Education, properly speaking, is the process by which children, young people and adults are initiated into forms of understanding, modes of action, and ways of relating to one another and the world, that foster (respectively) individual and collective self-expression, individual and collective self-development, and individual and collective self-determination, and that are, in these senses, oriented towards the good for each person and the good for humankind.

I was conscious, in framing this definition, that it should make it possible to expand the theory of practice architectures diagram to encompass, and give a picture of, the process of education as a whole. Thus I constructed the theory of education diagrammatically outlined in Fig. 13.3.

So, for me, that completes the picture of understanding the process of education in general, as something that is never final, but always

[51] Kemmis et al. (2014b, p. 2).

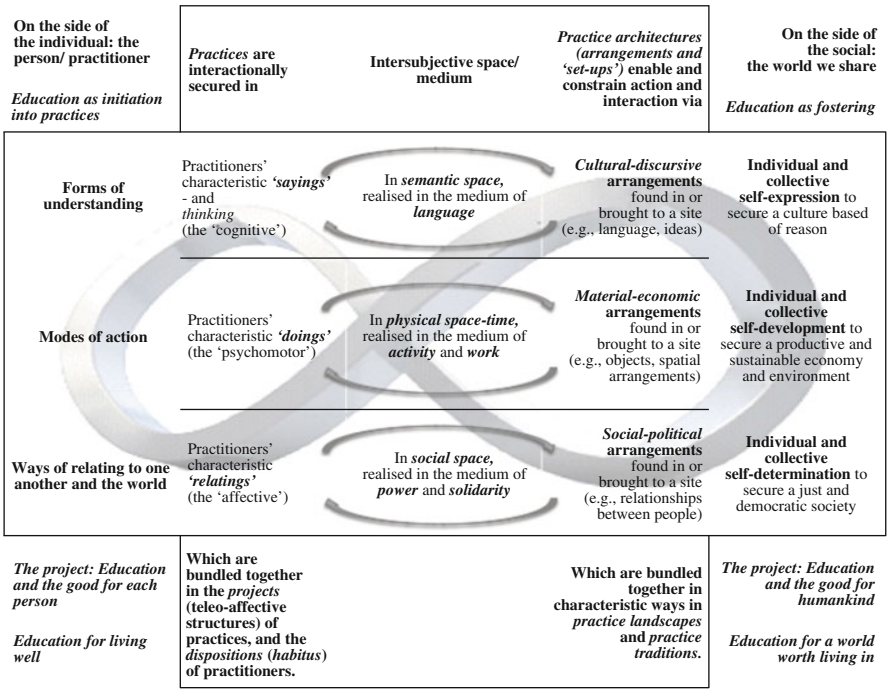

Fig. 13.3 A theory of education (adapted from Kemmis (2014, p. 41). Copyright 2014 by Finnish Educational Research Association and the Author. Reprinted with permission)

evolving in relation to changing historical conditions, in changing societies everywhere. More importantly, it gives a moral and political point to the theory of practice architectures, which I see as harnessed to the task of revitalising the process of education.

Kathleen: Needless to say, a task not limited to educational institutions…

Stephen: Don't get me started on the practice of 'education' in the age of 'schooling' (especially the contemporary, neoliberal, institutionalised form of education we confront in much of the world today). This is something we wrote about in *Enabling Praxis: Challenges for Education*. Perhaps we should leave *that* conversation for another day….

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Chapter 14
Roads Not Travelled, Roads Ahead: How the Theory of Practice Architectures Is Travelling

Stephen Kemmis, Jane Wilkinson, and Christine Edwards-Groves

Abstract This chapter asks how the theory of practice architectures is travelling, in terms of the way it has been used, primarily in this volume. The chapter (1) clarifies some key terms in the theory including (a) the relationship between practices and practice architectures, (b) the ideas of 'enabling' and 'constraining', and (c) the relationship between the theory of practice architectures and the theory of ecologies of practices. The chapter also addresses (2) the ubiquity of contestation and variation in the formation, conduct, reproduction, and transformation of practices and practice architectures to dispel the perception of 'seamless' harmony between practices and the practice architectures that sustain them. It examines (3) the question of agency and how it is evident in the formation and conduct of practices. Finally, the chapter addresses (4) the centrality to the theory of the notion of intersubjective spaces. The chapter concludes with some remarks encouraging critical use of the theory.

The authors of this chapter, Stephen Kemmis, Jane Wilkinson, and Christine Edwards-Groves, are among the six authors of *Changing Practices, Changing Education* (Kemmis et al. 2014), which is the most authoritative statement of the theory of practice architectures since its initial formulation in the chapter 'Situating praxis in practice: Practice architectures and the cultural, material and social conditions for practice' (Kemmis and Grootenboer 2008). We are, of course, delighted by the present volume, which extends the theory both by exploring its utility in new

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sites and settings, and also by providing more extended treatment of some of the ideas in the theory. Chapter 1 (this volume; Mahon et al. 2017) introduces the theory in a fresh new way. Chapter 13 (this volume; Kemmis and Mahon 2017) presents some of the genealogy of the theory, as seen through the eyes of Stephen Kemmis, in conversation with Kathleen Mahon.

Table 1.1 in Chapter 1 of this volume lists some of the chapters in which key terms of the theory of practice architectures are used and, in some cases, problematised. The table is a useful resource for readers who want to see how these key terms express their meanings in use in this volume. In this chapter, we will not present a comprehensive analysis of how, in our view, all these key terms in the theory are travelling. Instead, we will comment on a number of theoretical issues that arose in the course of preparing this book, sometimes because of questions or difficulties contributors faced in using some of the key terms, and sometimes because we want further to elaborate our thinking about these key ideas.

In the chapter, we have used examples drawn from the field of education as a domain of professional practice, mostly because we have drawn on actual examples from fieldwork in our own research. We nevertheless believe that our comments apply to practices in general.

Some Clarifications

In discussions with contributing authors, and in reading, reviewing, and editing contributions to this volume, we became conscious that we ought to clarify some things that we regard as central to the theory of practice architectures – things that some seem to have found ambiguous or confusing. The particular topics we want to mention here are (a) the relationship between practices and practice architectures, (b) the ideas of 'enabling' and 'constraining', and (c) the relationship between the theory of practice architectures and the theory of ecologies of practices.

The Relationship Between Practices and Practice Architectures in the Theory

We have used the theory of practice architectures extensively in the last 8 years or so, and tend to take it for granted that practices are made possible, and held in place, by the conditions we have described as 'practice architectures'. These are the cultural-discursive, material-economic, and social-political arrangements, or conditions, to be found in the site where a practice happens. These arrangements give practices their substance:

- arrangements of language and specialist discourses used in a site provide the substance for, and make possible, the sayings of the practice in the site;

- arrangements of objects in physical space-time in a site provide the substance for, and make possible, the activities and work that can be done in the practice (the doings of the practice in the site); and
- arrangements in the form of webs of relationships of power and solidarity (belonging) in a site provide the substance for, and make possible, the relatings of the practice.

Part of the purpose of the theory of practice architectures is to invite social and educational researchers to find whether and how such arrangements enable and constrain practices. To do this is to undertake the kind of archaeological task that Michel Foucault advocated in books like *The Order of Things* (1970), *The Birth of the Clinic* (1973), *Discipline and Punish* (1977), and his two volumes of *The History of Sexuality* (1978, 1985).

In *The Archaeology of Knowledge* (1972), Foucault wrote that

> …history, in its traditional form, undertook to 'memorize' the *monuments* of the past, transform them into *documents*, and lend speech to those traces which, in themselves, are often not verbal, or which say in silence something other than what they actually say; in our time, history is that which transforms *documents* into *monuments*. In that area where, in the past, history deciphered the traces left by men, it now deploys a mass of elements that have to be grouped, made relevant, placed in relation to one another to form totalities. There was a time when archaeology, as a discipline devoted to silent monuments, inert traces, objects without context, and things left by the past, aspired to the condition of history, and attained meaning only through the restitution of a historical discourse; it might be said, to play on words a little, that in our time history aspires to the condition of archaeology, to the intrinsic description of the monument. (1972, p. 7)

Looked at from one side, the aim of the theory of practice architectures, analogously, is to find, in practices, traces of their conditions of possibility. Conversely, looked at from the other side, one might also say that the aim is to find, in practice architectures, traces of the practices that have shaped them. Most straightforwardly, we would say that our usual aim is to see where the words uttered in practices came from, how the activities of practices were and are channelled by objects that were configured in particular ways at particular moments in physical space-time, and how the ways people relate to one another and the world in practices were and are made possible by relations of power and solidarity that always already pertain in the sites where the practices happen. We acknowledge, however, that finding the traces of these three kinds of conditions of possibility does not lead to neat, closed 'answers' or interpretations of the conditions that brought a practice into being, or the conditions that currently make it possible.

When we begin to find and follow those traces, we may fear being led out into an indeterminately large set of possibilities that reach far beyond the one who practises, deep into their history, far into their networks of association with others and with other objects in the world, and on through the immediate sites of practice to the social worlds beyond. But this fear is not well-founded. The theory of practice architectures imposes limits on these apparently limitless webs of possibility. *All* is not possible. The way a practice *actually* happens is finite; large though it may be, the site in which it happens is also finite. Practices may be indeterminately shaped

by the apparent vastness of practitioners' histories, but they are also *limited* by those histories, as well as by the histories of the sites in which they occur. This remains so even if it is nevertheless the case that people take ideas and activities and ways of relating to each other and the world from place to place, in the way that travellers of the nineteenth century took guidebooks, equipment, and letters of introduction with them as they moved from country to country and continent to continent. The theory of practice architectures invites researchers to explore, *in practice* and *in particular sites of practice*, the nature and provenance of the words, acts, and relationships that practitioners exhibit in their practice, to find how and where they 'erupted' into that person's practice, and to find how this or that particular site furnishes or furnished the conditions for this practice to be possible. To say '*in practice*' and '*in particular sites of practice*' is to emphasise the ontological perspective of the theory of practice architectures; it is to counter-pose the *concrete, what actually happened*, and *where did it happen*, with the abstract *what happens in general* or *universally.*

In short, the aim of the theory of practice architectures is to discover how practices – visible and performed – come to be, and what kinds of conditions make them possible. The point of this investigation is not just to be able to say what kinds of arrangements support a practice, but also why the practice takes the shape it does, thus leading us to consider whether it might be transformed, or conducted otherwise, under other conditions of possibility. The point of the theory is that it makes possible a certain specific kind of *critique*. It encourages us to consider how practices might be constructed otherwise under other conditions, and also asks how other conditions can be created through our practices and the practices of others. This kind of critique asks

- in what ways the language we use in our practices (made possible in observable cultural-discursive arrangements that populate the semantic space of the practice) might be unsustainable because false or unreasonable or misleading or based on misunderstandings of the world or one another;
- how the activities and work that populate our practices (made possible in observable material-economic arrangements that compose the physical space-time of the practice) might be unsustainable in terms of the ways they deploy or consume or destroy or waste energy and resources; and
- how the ways we relate to one another and the world in our practices (made possible in observable social-political arrangements that populate the social space of the practice) might be unsustainable because they cause suffering (usually unequally distributed) or injustice.

Conducting a critique of this kind is, inevitably, a historical task: it is a task of discovering or recovering histories of the use of words in languages and specialist discourses; discovering or recovering how things happened (when? where? how? why?); and discovering or recovering the historical consequences of our practices for the relationships between people and with the world. And so the research must be approached

- *empirically* or *descriptively* in relation to such observable 'facts' as we can discover about practices and the sites where they happen, for example, through ethnographic observation or through the analysis of transcripts of audio or video records of practices as they unfold;
- *interpretively* in relation to how the people involved understood what they were doing, and how we understand them, across the horizons of experience and history and culture that may separate us, usually through interviews with people involved and affected by particular practices, as well as various kinds of document analysis; and
- *critically* in relation to the sustainability of the practices, judged against criteria concerning the coherence of ideas, the ways resources are used, and the moral and political orders that may (or may not) justify what is done.

The point of the theory of practice architectures, then, is not to say merely *that* practices are shaped by practice architectures, or, merely *that* practice architectures are frequently shaped by practices, but rather to reach through these reciprocal relationships to arrive at *critical insights* about how our practices, and the practice architectures that make them possible, make worlds that are increasingly sustainable, or unsustainable, for the people who inhabit them, for others, and for the other species and the other things with whom and with which we share the planet.

The Ideas of 'Enabling' and 'Constraining'

In ordinary usage, the notion of something being 'enabled' or 'enabling' seems positive, a good to be pursued; and the notion of something being 'constrained' or 'constraining' seems negative, a thing to be avoided. Understood thus, being enabled is like being 'empowered', as if being enabled were an unalloyed good, and being constrained is like being cheated or deprived of something, as if being constrained were an unalloyed bad. This is not our view. In our view, both enablement and constraint have positive and negative faces: Fagin enables Oliver Twist's pick-pocketing; Oliver's expertise rests in certain pick-pocketing techniques that constrain how he moves in relation to his 'mark'; using solar power enables us to use less fossil fuels; if we constrain our energy use to renewable resources the world will be a better place.

Enablement and constraint are obverse sides of the same coin. Together, they direct and limit what is said, what is done, and how people relate to one another and the world. Enablement and constraint are both aspects of what are sometimes described as 'affordances' (Gibson 1977). We think of enablement and constraint as what channels, or canalises, the talk, the action, and the relationships that fuel practices. Languages and specialist discourses enable (make possible) the saying of some things; using those particular languages and discourses, however, also inevitably constrains what we can think and say. Similarly, objects in physical space-time both enable and constrain our action; and, similarly, particular arrangements of

power and solidarity in social space both enable and constrain how we can relate to others and the world. We do not come to the world as an open field in which anything is possible; we come to a world always and already populated with conditions that make some things more possible than others – though sometimes we can also alter those conditions of possibility.

In the theory of practice architectures, we use the language and specialist discourse of enablement and constraint to help us identify what directs and permits practices, on the one hand, and also what limits and holds them together in what Schatzki (2010) calls *activity time-space*, which he defines thus: "the timespace of human activity consists in acting towards ends departing from what motivates at arrays of places and paths anchored at entities" (2010, p. 38).

As the notion of activity timespace suggests, the disposition of arrangements in the world ("arrays of places and paths anchored at entities") both opens and encloses the space for practice. In terms of our view of intersubjective space, these arrangements, together forming practice architectures, both open and enclose the semantic space, the physical space-time, and the social space occupied by a practice. Ethnographic observation and interviews are ways to discover the boundaries of practices, and the ways they are anchored to the cultural-discursive, material-economic, and social-political arrangements found in a site.

The Relationship Between the Theory of Practice Architectures and the Theory of Ecologies of Practices

People sometimes ask whether the theory of ecologies of practices (outlined in Chapter 1) is part of the theory of practice architectures, or a separate theory. We sometimes say words to the effect that 'the theory of practice architectures is a theory about what practices are composed of; the theory of ecologies of practices is a theory about how *some* practices *sometimes* relate to one another'. (We emphasise the 'some practices' and 'sometimes' because, in our view, it is an empirical question – to be decided by observing practices as they happen – whether one practice is dependent on another, or whether the two are interdependent, either of which could be the basis for concluding that two practices are ecologically related.) Nevertheless, in our view, the theory of ecologies of practices is part of the theory of practice architectures understood more generally: it is a subsidiary theory to the theory of practice architectures.

Contestation and Variation

A criticism we have encountered in our attempts to apprehend how practices are enabled and constrained within particular conditions in a site is that our kinds of analyses appear to some readers to suggest that practices unfold seamlessly in sites because of the prefigurative power of the relevant arrangements. This reading gives the false impression that the performance of practices, and the securing of practice architectures, occurs in ways devoid of contestation and struggle. We think that, on the contrary, while social reality is often reasonably harmonious, practices and practice architectures are usually formed in ways that are messy, contested, and conflicted. Practices are analogous to living things. They unfold in the 'happeningness' of actual sites, occupied by human beings performing their daily routines and actions (Schatzki 2006), and, to a greater or lesser degree, pursuing their own interests. Practices do not spring forth fully formed or predetermined from the practice architectures that sustain them; rather, they must be struggled over and constantly reasserted as part of the micropolitics at play in social arenas. Practice and practice architectures may be replaced if more robust alternatives come along, ready to compete for their own survival.

One of the reasons for this appearance of seamless harmony may be that the term 'architectures' can imply or be read as suggesting a view of practices as emerging from already fixed or stabilised structures which hold them in place. To read practice architectures in this way is to mistake the particular arrangements that compose practice architectures for generalised social structures that predetermine, rather than prefigure practices. Schatzki (2002, pp. 210–233) discusses prefiguration at length, but defines it pithily in these words: "… the prefiguration of action is a delimitation of fields of possibility (via constraint and enablement)" (2002, p. 219).

The distinction between predetermination and prefiguration is critical. A key tenet of the theory of practice architectures is its insistence on the primacy of the site as containing the necessary but not sufficient conditions of possibility for practices to emerge in one form rather than another. Schatzki's notion of site ontologies (2003, 2005) is crucial here, because practice architectures are the particular *nexuses* of arrangements that make particular practices possible in specific sites. Equally importantly, they render other practices as less possible and less likely to emerge in particular sites at particular times (i.e., less sayable, less doable, and less likely for people to relate in certain ways to other people and the world).

To illustrate, the discourse of school principals as managers emerged in the 1990s in Australia as part of a series of policy borrowings from England and the USA, underpinned by neoliberal notions of education as analogous to a business enterprise with a principal as its Chief Executive Officer. This discourse was taken up with particular enthusiasm in the state of Victoria, seeming to sweep away previous discourses of equity and equal opportunity. Those earlier discourses, a crucial part of the previous government's long-term agenda, began to jostle uneasily with new policy edicts and resource arrangements that presumed a demarcation between principals and teachers. The arrival of this new managerialist discourse, like a new species invading an already settled territory, prompts us to investigate the conditions

of possibility – especially the social-political conditions of possibility – that led to the state of Victoria being particularly receptive to such policies while other Australian states remained less receptive, and perhaps more resistant, to them in the same era.

Furthermore, even when the new policies were ushered in, principals in some school sites resisted and contested the new practice architectures that supported these radically different sayings, doings, and relatings of leadership. The new policies did not preclude individual principals strategically continuing to lead in ways that maintained their former focus on social justice and equity imperatives, albeit under these changed conditions of possibility. In some sites, principals adopted the habitus of manager/entrepreneur with alacrity. In such sites, the new arrangements ushered in by the government, and the subsequent changes to the conditions for possibility in these sites, led to the emergence of more managerialist sayings, doings, and relatings, sometimes transforming the sites. These changes were not uncontested, however. Their meanings were struggled over, challenged, and fought for in the day-to-day dynamics of educators' individual and collective practices. The subsequent actions and relations prefigured by these new arrangements varied depending on the actual site (primary, secondary, rural, regional, urban, school size, nature of the community, and individual and collective habituses of the principal and teachers) in which they took place and in the conditions for possibility in the site. We thus conclude that the new neoliberal management practices envisaged by government did not always find a congenial niche in the territories to which they had been imported. Indeed, in some sites, they encountered existing species of leading and educational practices with which they had to compete for legitimacy and survival. In some sites, the new practices succeeded in becoming established; in others, they achieved neither legitimacy nor survival.

The infinity sign on our figure of the theory of practice architectures (Chapter 1, Fig. 1.3) draws attention to this ever-fluid and dynamic process of contestation and variation. The infinite tracing of the sign invites exploration of how and why particular kinds of leadership practice secured a *management* habitus evident in one leader's practice in one site but did not secure such a habitus and did not become evident in another leader's practice in another site. The contrast compels us to investigate not only what made neoliberal management practice more congenial in the habitus of one leader and not another, but also what particular kinds of conditions in each site made neoliberal management practice more or less possible (perhaps more hierarchical relationships between principals and other staff in one case, and more collegial relationships in the other, for example). Far from being a seamless process of determination, we see the formation and transformation of practices as achieved – ordinarily – through contestation, which is both an inevitable and ubiquitous part of the restless, dynamic, and dialectical process by which some practices unfold in specific sites but not in others, prefigured by the historical and contemporary conditions of possibility and affordances that pertain at one particular site but not at another.

Another reason why there may be a tendency to smooth over the inevitable dynamic of contestation is that the theory of practice architectures, like Schatzki's

(e.g., 2002) practice theory, says that practices are enabled and constrained by 'arrangements'. To some readers, 'arrangements' may seem rather abstract and general, rather than (as we intend) concrete and specifically present in particular sites. The theory of practice architectures focuses particularly on three kinds of arrangements: cultural-discursive, material-economic, and social-political. It might *sound*, to some readers, as if these arrangements are more or less rigid or fixed, enduring, or orderly. But the authors of the theory neither intend nor imply such rigidity, longevity, or orderliness: rather, we presume that practice architectures will shift and change over time (even though some endure in evolving forms for prolonged periods), and they can be disorderly as well as orderly. While some practice architectures appear to be institutionalised, stable, and enduring, over time, they frequently turn out to be contested, unstable, and transient. Moreover, sometimes practice architectures like the weather are highly variable: if the day is sunny, we can play cricket, if it is rainy, we can't. From the perspective of the theory of practice architectures, the arrangements to be found in a site are generally (in the long view) matters of happenstance: they were once produced by particular things that happened (including past practices), and they will change as different things happen. A principal aim of the theory of practice architectures is to tease out how and when these particular arrangements came to be, and how securely (or not) they prefigure the way practices unfold.

This leads us to the notion of *variation*, which we regard as essential to practices and practising. Most of the time, we humans are adaptable: we vary the performance of our practices (our sayings, doings, and relatings) to bypass obstacles, to avoid untoward or inappropriate outcomes, to rise to challenges, or to seize opportunities. We act within the constraints of the practice architectures around us, but we are also aware that we can alter the flow of our practice as circumstances change, like the flow of a stream around a new boulder that has fallen into its course. Yet, as participants in practices, we are equally aware that the banks of the stream themselves change over time in response to the strength and direction of the stream's flow. The stream and its banks both adapt to one another dialectically. In the same way, practices and practice architectures adapt to one another.

This is to say that practices, once 'laid down' in the repertoire of acting agents, may have a tendency to be *reproduced* on future occasions, but they also have the capacity to *vary* and to *adapt* in response to changing circumstances. Because they vary and adapt, practices also have the power to be *transformed* under appropriate circumstances. Instead of being (re-) produced in the form in which they unfolded on previous occasions, they may now unfold in different – sometimes dramatically different – forms on new occasions. Thus, for example, where in the past, a teacher we observed once saw student misbehaviour in a classroom as 'challenging' the social order of the classroom, she now sees it as 'interrupting others' learning'; where, in the past, she responded to challenging student behaviours negatively or punitively, she now responds positively by 'inviting the student back to your learning'. She now sees situations of this kind in a new light: her understanding of the situation, and what she says, has been transformed, along with what she does, her action, and how she relates to the misbehaving/distracted student. In fact, of course,

these three elements of her practice are inextricably interwoven: as her practice happens, they all appear and unfold together, within a transformed *project* of her practice: to treat classroom management not as a threat to the social order of the classroom, but rather as a student's momentary distraction from the practice of learning, which is, and remains, the central project of the student's practices, despite occasional lapses.

The dialectic of reproduction and transformation of practices is driven by the power of *adaptation* (realised in our capacity of adaptability): reproducing former practices to meet the usual circumstances, or varying them to meet the demands of new circumstances. Like the dialectic of reproduction and variation in biology, which permits the evolution of new species from former species, sometimes alongside the persistence of earlier forms, the power of adaptation also permits new forms of practice to evolve. The power of adaptation also allows the reproduction and transformation of any *practice architectures* that are constructed or produced by the practices of human beings – for example, the design of classrooms, or curricula, or the qualifications of teachers. Thus, practice architectures can be *institutionalised*, and be relatively stable over time, and they can also become objects of *contestation*, and destabilised. Once contested and destabilised, practice architectures that are the products of human agency can then be rescued, destroyed, or transformed (or maybe more than one of these alternatives). And if they are transformed, they may then become, in their turn, institutionalised, and then, as they confront the exigencies of human action in history, they may also become, once again, objects of contestation. Seen in the light of history, contestation and institutionalisation are not polar opposites but different sides of the same coin.

Drawing on Aristotelian (Bartlett and Collins 2011) and neo-Aristotelian traditions,[1] and also on critical traditions that emerged in the last century (e.g., Habermas 1972, 1974), the authors of the theory of practice architectures see practices and practice architectures as mutable and malleable, as made and re-made through people's action in history. Not all practices and practice architectures are easy to change, however: some have deep roots that make them strongly resistant to change. The practice architectures of the capitalist economy, revealed by Marx, are one example. In our time, the practice architectures of neoliberal management are another. Both are malleable, however. Capitalism in the twenty-first century is different from what capitalism was in the nineteenth century; neoliberal management in the public sector today is different from the consultative forms of management that characterised decision making in the progressive welfare states of 40 years ago. In the latter, experts advised and authorities deliberated about what to do, taking multiple possible kinds of outcomes into account: cultural-discursive, material-economic (including, by the end of the twentieth century, the environmental), and social-political. In the mid-twentieth century, civil servants were perhaps more conscious, in advising policy-makers, about how their decisions would affect whole populations (not just individuals) culturally, materially, and socially.

[1] For example, Toulmin's (1972) theory of the 'coupled evolution' of concepts.

Agency

Some readers think that the theory of practice architectures does not have a place for the notion of (human) agency. The theory's insistence upon the primacy of practices as the key site for human sociality and its critique of the sovereign individual as the primary locus for transformation might perhaps be read as implying a non-agentic and more deterministic view of the world and of social life. Our position, however, is that the opposite is true.

The theory of practice architectures is first and foremost a theory about practices – their production, their persistence through reproduction, their transformation, and their dissolution. Practices are the motor of human co-existence, but this statement does not imply that humans do not practise agency. On the contrary, practices are performed by human beings, and are enmeshed with and held in place by specific practice architectures which give sites their distinctiveness and material form. Human activity (individually and collectively) can and does alter these arrangements, bringing some kinds of arrangements into being and dissolving others. Particular arrangements set up the conditions of possibility for some practices rather than others, but whether a practice will be performed remains a matter of human agency – although sometimes conditions are so oppressive that they leave people little choice about what they can do. More usually, however, circumstances allow participants to innovate or experiment in what they do and how they do it – leaving room for creativity, and for participants to demonstrate forms of agency that are more radical or emphatic.

Practices come into being, are conducted, reproduced, and transformed by the individuals who inhabit them, who come to embody and realise them in their day to day actions. We make our worlds by acting within them, but we do so in ways that are constrained. As Marx (1852) colourfully put it in the second paragraph of *The Eighteenth Brumaire of Louis Bonaparte*,

> [People] make their own history, but they do not make it as they please; they do not make it under self-selected circumstances, but under circumstances existing already, given and transmitted from the past. The tradition of all dead generations weighs like a nightmare on the brains of the living.

Our agency lies in coming to understand the constraints within which we operate but also that, when appropriate or needed, we can open up opportunities to imagine and enact alternative conditions that make new practices possible.

The *disposition* or habitus which practitioners bring to a site is crucial. Practices make history (Kemmis et al. 2014, p. 25), and histories make practitioners. Human beings inhabit practices – bringing their individual and professional histories and dispositions to the work of perceiving, interpreting, and differentially enacting and realising or challenging or resisting the projects of different practices. For instance, how Australian teachers individually or collectively make sense of and enact the project of a practice like compulsory national literacy and numeracy testing tells us a great deal about their feel for the education 'game' and the possibilities for differing testing practices afforded by the specific site in which they are teaching (cf. Parr

and Bulfin 2015). Depending on the knowledge and understandings they bring to the site, and the conditions of possibility which the school site affords them, they may work with the tests in ways that are more or less educative.

The concept of *praxis* is one of the things that distinguishes the theory of practice architectures from some other practice theories. In insisting on the primacy of the 'human and humanistic' in the enactment and realisation of practices, and that practice is a "human and social activity with indissoluble moral, political and historical dimensions" (Kemmis et al. 2014, p. 25), the theory foregrounds the transformative potential of practices and of the practitioners who enact them. In this view, practitioners are not solely operatives of a system in which they churn out the fully administered child or higher test scores to satisfy national and international rankings. The concept of praxis presupposes agency – opening up for possibility a view of education practice and practitioners (students, teachers, leaders) as makers and transformers of history, through individual and collective action. The critical purpose of the theory of practice architectures is to provide theoretical, analytical, and transformational resources that enable a particular kind of critique with a moral purpose – to discern untoward consequences of our practices and, individually and collectively, to discover whether other conditions of possibility for different kinds of practice can be created through our collective and individual actions.

This view of practice also recognises that agency is not only an individual matter but is also realised via interactions between the human and non-human world, for example, through particular kinds of material resources that shape human practices (allocation of budgets, national testing, the kinds of physical and virtual spaces in which schooling takes place). It recognises that practices are interactionally secured, that they are embodied both in the systems we inhabit and in the lifeworlds in which we encounter one another as human beings. The phrase 'interactionally secured' is crucial here, for the word 'secured' in English stresses that this is an agentic action and ongoing process, and not an inevitable result. Nor is it realised only in the actions of individual human beings; it is also produced collectively through the dialectical interplay between agents as they participate in a practice. To say that practices are interactionally secured is also to say that they are *politically* secured. They are secured through collective action. To explore *where* practices are secured, we now turn to the notions of intersubjectivity and intersubjective space.

Intersubjectivity and the Three-Dimensional Composition of Intersubjective Space

The theory of practice architectures is a resource for exploring the intricacies of practical action in social life and how action is shaped as it happens in passages of real, historical time. The idea of human sociality is central to the theory of practice architectures, as it is to Schatzki's practice theory (e.g., 2002). This sociality comes to life as we encounter one another – frequently, as we interact in practices. Yet

these encounters also position us as individuals, and as *subjective* beings; they help form our habitus and our identities, for others and for ourselves. In large part, then, our subjectivity is formed *intersubjectively*.

For some social theorists, the notion of intersubjectivity is central for theorising the social world. Husserl, for example, defines "intersubjectivity as 'shared' or 'mutual' understanding" (cited in Duranti 2010, p. 12). Habermas (2003) fleshes out a slightly different view of intersubjectivity, rooted in the *logos* of language, i.e., the possible meanings a language 'holds' in the usage of the linguistic community of its speakers. He sees the power of the intersubjective in the languages we share, and what they allow us to understand and say, even about ourselves, so that who we are, to ourselves, is only made possible in the *logos* of the language we use to express ourselves:

> As historical and social beings we find ourselves always already in a linguistically structured lifeworld. In the forms of communication through which we reach an understanding with one another about something in the world and about ourselves, we encounter a transcending power. Language is not a kind of private property. No one possesses exclusive rights over the common medium of the communicative practices we must intersubjectively share. No single participant can control the structure, or even the course, of processes of reaching understanding and self-understanding. How speakers and hearers make use of their communicative freedom to take yes- or no-positions is not a matter of their subjective discretion. For they are free only in virtue of the binding force of the justifiable claims they raise towards one another. The *logos* of language embodies the power of the intersubjective, which precedes and grounds the subjectivity of speakers.
>
> …. The *logos* of language escapes our control, and yet we are the ones, the subjects capable of speech and action, who reach an understanding with one another in this medium. It remains 'our' language. … From this perspective, what makes our being-ourselves possible appears more as a transsubjective power than an absolute one. (pp. 10–11)

Certain kinds of practice theory, the theory of practice architectures among them, understand practices *ontologically*; i.e., they take the view that practices can be understood in terms of *what happens* in practice as it unfolds in the everyday life of individuals. The theory of practice architectures thus acknowledges, and carefully attends to, the ways in which people encounter one another in interaction *as it happens* – in particular, they encounter one another as interlocutors in language, and as co-participants in activities, and in reciprocal relationships of various kinds. According to the theory, as people co-exist in human activity, they create and open up intersubjective spaces in which they act in the present, in a space shaped by the remembered past (as traces from history), and anticipating possible future actions and outcomes (Duranti 2010; Kemmis et al. 2014). As noted earlier, Schatzki (2010) describes this kind of space as *the timespace of human activity*: "acting towards ends departing from what motivates at arrays of places and paths anchored at entities" (p. 38).

Ontologically, then, the social accomplishment of practices is achieved, in practice, in the enactment of sayings, doings, and relatings, held together in the project of a practice. These sayings, doings, and relatings, in turn, are made possible by the existence (or not) of certain arrangements in a site. Accomplishing practices involves entering the social world within which

> characteristic arrangements of actions and activities (doings) are comprehensible in terms of arrangements of relevant ideas in characteristic discourses (sayings), and when the people and objects involved are distributed in characteristic arrangements of relationships (relatings)… that 'hang together' in a distinctive project. (Kemmis et al. 2014, p. 31)

Particular cultural-discursive, material-economic, and social-political arrangements combine to form practice architectures that enable and constrain the ways in which people can interact in a particular practice, and thus give a specific, 'three-dimensional' shape to the intersubjective space in which the practice unfolds. To explain what we mean by the three-dimensionality of intersubjective space, we will say a little more about what we mean by the 'cultural-discursive', the 'material-economic' and the 'social-political' in the theory of practice architectures.

First: the cultural-discursive. Unlike some other theorists of culture, we see 'culture' strictly through the lens of the *semantic*, although we also include the syntax by which propositions in language allow meaning to be shared. As described by Habermas (2003) above, we see the cultural-discursive as embodying the *logos* of language: what can be thought and said in that language (or dialect or specialist discourse) among the members of the language communities using the language. As a rough approximation, one might say that 'culture' is like the *lexicon* of the language; more precisely, we take the Wittgensteinian (1958) view that this lexicon comes to bear possible meanings (and revisions of meaning) through being used in language games. We thus take a rather different view of the 'cultural' than some anthropologists or sociologists or cross-cultural theorists like Hofstede et al. (2010), for example, who see culture as a fluid and dynamic process "consist[ing] of the unwritten rules" of a "social game" that is "learned", not "innate" (p. 6). On their view, the cultural gives shape and texture to the tacit rules around what is sayable, doable, and relatable, which participants in a practice invariably encounter when they enter a new site. In our view, by contrast, the 'cultural-discursive', is to be understood only in terms of things that occupy *semantic space*, even though, *empirically*, 'the cultural' always manifests itself together with material-economic, and social-political arrangements. We reject the definition of Hofstede, Hofstede, and Minkov because it conflates these realms *analytically*, i.e., in the very definition of the 'cultural'.

Similarly, a Foucauldian interpretation of discourses sees them as "ways of constituting knowledge, together with the social practices, forms of subjectivity and power relations which inhere in such knowledges and relations between them" (Weedon 1987, p. 108). This view of discourses draws attention to the ways in which the cultural aspect of cultural-discursive arrangements is also imbricated in the social-political relations of ruling within specific sites. Of course we agree that this imbrication occurs, and it is important to see that it occurs – indeed, that it reaches far into what we say and think and how we relate to others in everything we think and say. Here again (as with the Hofstede, Hofstede, and Minkov definition), we assert that 'knowledges' and 'power relations' are *analytically distinct*, even though they never (or almost never) appear *empirically* in the absence of each other – or in the absence of the material-economic. In social life as it is lived, we

assert, these three different dimensions always appear together in intersubjective space.

We believe that a particular strength of the theory of practice architectures is that it disentangles these three realms *analytically*, inviting us to consider, in research, how they are entwined in specific ways when they appear (together) *empirically*. This provides the detailed material necessary to fuel the *critical* aspiration of the theory: to consider how the sayings, doings, and relatings of practices are entwined together in specific combinations in different practices, with specific consequences, which may be untoward. If the consequences are untoward, the theory then invites us to consider how the conduct and consequences of our current practices might be transformed, including by changing the locally site specific practice architectures that make them possible.

In short, our view is that 'the cultural-discursive' registers in our minds, in language; 'the material-economic' is what we encounter as bodies, moving around in the world; and 'the social-political' is what we feel or what we can reveal when we inhabit social spaces along with others (in relationships of power and solidarity). *Analytically speaking* (but not in *empirical* reality), this is to assert that

1. 'the cultural-discursive' encompasses only what appears in *semantic space* – in the linguistic world in which we encounter one another in language, enabling and constraining what we can think and say, and what we can mean;
2. 'the material-economic' encompasses only what appears in *physical space-time* – in the materiality of things in the physical world in which we encounter one another, enabling and constraining how we can move about in the world; and
3. 'the social-political' encompasses only what appears in *social space* – in how we will form (or not) bonds of belonging and solidarity with one another (which, by the way, is not always an unconditional good), or be in relations of power with or over or under one another (or be socially integrated with one another, or in conflict or harmony with others, or resistant to or complying with others).

When we see these three 'dimensions' of intersubjective space as *analytically distinct but (always) empirically intertwined*, we can raise the critical *historical* question of when and how they came to appear in these combinations, and the *political* question of whether and how they might be disentangled, or differently entangled, or entangled with other things in other ways.

These spaces are never neutral; they are always mediated and contested (by past and present practices, and by particular cultural-discursive, material-economic, and social-political arrangements) as persons and practices enable and constrain what is possible. Our subjectivity as unique individuals is thus always grounded, formed, and transformed through our co-participation in intersubjective spaces. People become practitioners of practices by co-inhabiting (acting in and on) intersubjective spaces in-the-moment, in physical space-time, and over historical time. In our interactions, in intersubjective space, we constantly revise and renew our practices, the practice architectures that enable and constrain us, and our *selves* – our subjectivities, our identities, our dispositions, and our agency.

Conclusion

In this chapter, we have aimed to clarify some key terms in the theory of practice architectures that have sometimes confused readers or users of the theory. We have also responded to some criticisms of the theory (for example, that it apparently overlooks the question of agency). In concluding the chapter, we want, once again, to emphasise that the theory was devised with a critical intention. We concede that it is sometimes helpful simply to be able to *describe* practices and the ways they are enabled and constrained by the practice architectures that make them possible and hold them in place, or to describe how particular practices are interdependent with other practices in ecologies of practices. We also think it is helpful to be able to *interpret* how people experience practices – their own and others' – as part of a broader hermeneutical task of understanding others and ourselves in the social world. But the theory was devised to help us explore practices *critically*: to see when and how they were formed, reproduced, and transformed; what social conditions (practice architectures) make them possible and hold them in place; and how both practices and practice architectures might need to be changed if they turn out to have untoward consequences: if they are incoherent or unreasonable; wasteful, destructive, or unsustainable; or the cause of suffering or injustice.

The critical task is to see practices in relation to the social conditions that make them possible, and to understand how practices sometimes produce untoward consequences – even consequences contrary to the intentions of those who participate in the practice (untoward consequences like ill-health in the case of health practitioners, or mis-education in the case of educational practitioners). This critical task requires what Nicolini (2013, Chapter 9) calls 'zooming out' (as well as the 'zooming in' of close analysis): widening our frame of analysis to see the everyday actions and interactions that form, reproduce, and transform practices (and practice architectures) as they unfold in particular sites and societies, at particular moments in longer histories. The critical task also involves taking a stand: it aims to discover, explore, and explain when and where and how and why practices have untoward consequences, if and when they do. And this, in turn, means naming such things as the incoherence or contradictoriness of the rationales or intentions that guide practices; naming when and why practices are sometimes wasteful, destructive, or unsustainable; or naming the suffering or the injustices they may cause; or naming the solidarities (whether of the elite, or of colleagues, or of community members) they strengthen or threaten; or revealing the capillary operations of power whose results are compliance or oppression. One might say it is sufficient for a critical theory just to name such things, but, in our view, simply naming untoward consequences is insufficient. In our view, the task of a critical theory also includes identifying ways in which such untoward outcomes can be avoided or overcome. It is to have some practical answer to the question "What is to be done?"

And so we might ask, about this chapter, what untoward consequences has it named, and what has it said about what is to be done about dealing with these untoward consequences? Our task has been a modest one. As co-participants in the

process of preparing this volume, and as interlocutors with many people exploring the power and limitations of the theory of practice architectures, we have sometimes observed how the theory has seemed incoherent or ambiguous or confusing; how people have struggled to make analyses of practices as they unfold in sites; or how they have sometimes found themselves in disagreements with others about their analyses and their implications. In this chapter, we have therefore tried to clarify a few of the key terms of the theory in an attempt to dispel some ambiguities or confusions, to make analyses more effective and more trenchant, and to encourage users of the theory to do so not only descriptively and interpretively, but also critically.

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Chapter 15
Transforming Education and Professional Practice

Susanne Francisco, Kathleen Mahon, and Stephen Kemmis

Abstract In this chapter, we return to the notion of exploring education and professional practices, the key focus of this volume. In the opening chapter, we argued that the theory of practice architectures is simultaneously a theoretical, an analytical, and a transformative resource. Here we highlight some of the ways the chapters in this book have capitalised on the affordances of the theory of practice architectures as their authors have explored education and professional practices. We comment on how, individually and collectively, the chapters contribute to ongoing conversations about particular practices, and our understanding of practices in general.

Transforming education and transforming professional practice are serious and difficult tasks. They are serious because continual revitalisation is necessary if education and professional practice are to remain relevant and responsive to ever-changing societal and environmental circumstances. They are difficult because what ought to be done in response to changing conditions, or in our day-to-day practice, is often unclear and contested. The transformative project, then, demands of practitioners, policy makers, and researchers, that we continue to strive to understand the conduct and consequences of our practices under the inevitably changing historical conditions in which we find ourselves.

Although difficult and serious, these tasks are part of everyday professional life, and they are rewarding when undertaken as shared projects with like-minded

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colleagues and friends. This book is a collection of works that contribute to this transformative project (we might call it a 'praxis project'), by exploring particular aspects of education and professional practice through the lens of the theory of practice architectures. In this chapter we draw together some of the topics that have been addressed throughout this volume as authors have focussed on various aspects of education and professional practice. At the heart of each of the chapters is a commitment by the researchers to transform education and professional practice in socially and ethically informed ways. The collection is diverse: the individual contributions represent a variety of topics, methodologies, and national perspectives, and a range of ways of putting the theory to work. Yet all share in the quest to better understand practices – what they are, what shapes and makes them, and what they do.

In the sections that follow, we consider the various types of work that the chapters in this book have done, and identify some commonalities across chapters. First we comment on the ways in which the theory has been used and developed in the various chapters. Next, we provide an overview of the issues that were the focus of the research reported in the chapters, and the themes that emerged from the chapters. After this, we identify some of the things we think the chapters collectively offer in terms of insights into education, professional practice, and the nature of practice itself. Finally, we make some concluding remarks about the notions of exploring and transforming education and professional practice.

The Theory in Use

The chapters in this book do various kinds of work. Chapter 1, 13, and 14 outline the theory of practice architectures and position the theory within the broader field of practice theory. In Chapter 1, Mahon, Kemmis, Francisco, and Lloyd introduce and locate the theory. In Chapter 13, Kemmis and Mahon contextualise the theory historically, as seen through Kemmis's eyes, and as he worked with the theory and its precursors over nearly 40 years. In Chapter 14, Kemmis, Wilkinson, and Edwards-Groves clarify some conceptual issues that have arisen as the theory has been used by various authors, including contributors to this volume. Chapters 2 to 12 are 'case chapters', analysing empirical material about different kinds of practices in their specific settings. These chapters variously demonstrate how the theory of practice architectures can be used as an analytical, theoretical, and transformational resource to generate new insights about and for practice.

Some authors of case chapters used the theory as an analytical resource to examine specific practices. In Chapter 2, for instance, Christine Edwards-Groves and Peter Grootenboer present a detailed analysis of dialogic interactions in two primary school classrooms, using the theory to deepen our understanding of how practices are co-produced by teachers and students. In Chapter 8, Lill Langelotz explores the practices associated with a peer group mentoring project that supported the continuing professional development of a group of Swedish secondary teachers. In Chapter 9, Annette Green, Ros Brennan Kemmis, Sarojni Choy, and Ingrid Henning Loeb examine tensions that arise when new Vocational Education and Training in

Schools (VETiS) teachers from industry backgrounds encounter the practice architectures of secondary schools, to show how their prior experience and practice in industry leads them to practise teaching in ways that differ from the practice of some other secondary school teachers.

Authors of other case chapters used the theory of practice architectures as a theoretical resource that allowed them to problematise current understandings of certain practices. In Chapter 4, for example, Nick Hopwood puts the theory of practice architectures in conversation with Baudrillard's ideas on simulacra to problematise simulation pedagogy in university education in the health professions. In Chapter 3, Ela Sjølie challenges notions of a theory-practice gap as well as discourses of harmony and coherence in pre-service teacher education. In Chapter 5, Andi Salamon invites a reconsideration of infants' actions, seeing them as practices that express infants' agency, and shape the practices of early childhood educators. In Chapter 12, Matti Pennanen, Laurette Bristol, Jane Wilkinson, and Hannu Heikkinen raise questions about what researchers may and may not see when conducting analyses as part of their collaborative research practices. In Chapter 6, Susanne Francisco uses the theory of ecologies of practices to reconceptualise the learning practices of novice Vocation, Education, and Training (VET) teachers, introducing the concept of a *trellis* of practices that support learning (PSLs) to show how these novice teachers' learning is enhanced when multiple PSLs interconnect to jointly guide the novice teachers' learning.

All the case chapters treat the theory of practice architectures as a transformational resource, especially in the sense that their insights serve to inform future practice (e.g., Hopwood considers the transformational potential of simulation). Many chapters give examples of how untoward consequences[1] or constraining arrangements have been challenged, reoriented, or successfully negotiated; they show how using the theory can generate hopeful and/transformative narratives. Some of the chapters bring change and the consequences of change more explicitly into view. In Chapter 10, Jane Wilkinson examines endeavours by a school executive team to enact leading practices as a socially just practice and praxis in their school. In Chapter 9, Lena Tyrén explores school organisational change in response to national economic reform in Sweden; in Chapter 11, Kathleen Mahon and Letitia Galloway examine a faculty restructure in an Australian university; both are examples of analyses of critical incidents linked to neoliberal pressures and managerialism. In each of these three chapters, the theory is used to highlight the complex ways in which sustainable and unsustainable, or just and unjust practices, have been made possible and held in place or challenged, and what this has meant for those engaging in and affected by the relevant practices. Chapters 9 and 11 also tell a story of the strength and resilience that can be found in solidarity between like-minded educators.

In this volume, authors have put the theory of practice architectures to work using a range of different research methodologies. While all of the case chapters

[1] See Chapter 1, this volume, for an explanation of how the term 'untoward consequences' is understood in the theory of practice architectures.

discuss research that examines practice, and all draw on the theory of practice architectures in their investigations, there is a diversity of research aims and questions about practice. For instance, some focus on how practices are constituted, while others focus on relationships between practices. Among the research methodologies represented in the volume are ethnography, auto-ethnography, action research, thematic analysis, critical hermeneutics, narrative analysis, and case study, or a combination of research approaches and strategies (as Pennanen et al. have used in Chapter 12). Some chapters use the theory retrospectively to analyse material that had previously been analysed using other lenses (as Green et al. have done in their re-analysis of novice VETiS teachers' practices using the theory, in Chapter 7).

Many of the chapters provide useful reflections on using the theory of practice architectures as a lens. One commonly identified strength is that the theory puts power explicitly into perspective. Nevertheless, it remains true that research reports cannot address some topics for reasons of research ethics, or for the reason that site-based politics can put people and communities at risk of harm if made public, or if presented in particular ways. This difficulty arises for most researchers studying particular settings in depth, of course, no matter what social theories they are using. Being able to identify the operations of power does not necessarily mean that researchers can 'unmask' its effects in their reports, precisely because they are bound by research ethics to protect people in the setting from harm. As researchers, we remain conscious of our debt to participants who generously give us their time, and access to their work; we would not wish to repay this debt by causing them trouble, despite public interest arguments in favour of revealing the untoward effects of power in some social settings. In such cases, we take the view that unmasking the intimacy of the operations of power may best be done in reports that do not reveal the identity of particular settings or people.

Examining Education and Professional Practice

Each of the case chapters in the book is grounded in the local site where the research was undertaken, and in the particular practice field/profession being explored. By putting the theory to work in the different ways outlined above, the contributors to this book not only reveal something about the theory and its use, but also about the particular practices and fields/professions they have studied. In this way, the discussions make significant contributions to our knowledge about (and for) education and specific professional practices.

Taken together, the chapters explore a range of fields/professions and practices. Some of the fields represented in this volume include simulation pedagogy, early childhood education, pre-service teacher education, continuing professional development, primary school teaching and learning, work-based learning, higher education pedagogy, teacher education, nurse education, Vocational Education and Training (VET), VET in Schools (VETiS), and research. Practices that are examined in detail include mentoring practices (e.g., within TAFE colleges and within a

secondary school), learning practices (e.g., of babies, primary school children, school teachers, VET teachers, and pre-service teachers), leading practices (e.g., in schools), collaborative research practices (e.g., in school development projects, 'communities of learning', and in collaborative meta-analyses) and pedagogical practices. Many chapters investigate educational practices, in settings including schools, workplaces, tertiary institutions, and early childhood centres.

While each chapter makes a contribution to knowledge about some particular field of practice, there are themes that run across chapters and collectively extend our understanding of certain issues and practices, especially since the authors bring a range of cultural understandings, professional backgrounds, and theoretical perspectives to the conversations (including their own unique interpretations of the theory of practice architectures). Almost all of the chapters, for instance, explicitly explore learning. Some chapters consider learning in relation to mentoring (e.g., in Chapter 8, Langelotz addresses peer group mentoring of experienced teachers, while, in Chapter 6, Francisco examines induction mentoring of novice VET teachers), or in the context of continuing professional development of teachers (e.g., in Chapter 9, Tyrén investigates an ongoing school development project framed as action research, and, in Chapter 8, Langelotz investigates the context of a peer group mentoring program). Others consider learning in pedagogical exchanges between teachers and students (e.g., between aspiring nurses and nurse educators in simulated hospital rooms, between infants and early childhood educators in early childhood settings, between teachers and students in a primary classroom, and between pre-service teachers and teacher educators in an initial teacher education course).

Some of the chapters deal explicitly with the issue of power, including the kind of power we might associate with agency. For instance, a number of the authors explore where and how people are able to express agency (including babies, Salamon, Chapter 5) and find spaces of agency (e.g., Mahon and Galloway, Chapter 11), in some cases creating new practice architectures amidst contestation and change (e.g., Green et al., Chapter 7). In Chapters 8 and 12, we see very different takes on power: in Chapter 8, Langelotz highlights the normatising and disciplining effect of certain epistemological ideals on teachers' participation in professional learning activities, and, in Chapter 12, Pennanen et al. examine the impact on research practices of power differentials between researchers in a team.

Some themes relate to issues associated with practice architectures that are implicated in the immediate and local sites of practice examined, but that also extend beyond those immediate sites. For instance, Tyrén (Chapter 9), and Mahon and Galloway (Chapter 11) highlight the negative impact of far reaching neo-liberal ideology and external funding pressures and policies on various arrangements within sites. In Chapter 6, Francisco considers some of the implications of the ongoing casualisation of the Vocational Education and Training (VET) teacher workforce on the quality of VET teaching. This phenomenon is not restricted to VET teaching. Other chapters address discourses that perpetuate unproductive, or unjust practices – such as deficit discourses (see Wilkinson, Chapter 10, and Salamon, Chapter 5), and managerialist discourses (Mahon and Galloway, Chapter 11).

Many of these issues have significant practical implications across professions and across educational sites.

Through the narratives of practice woven into the chapters – narratives that are enriched by empirical material – we see inside the complex relationships between practices (including interdependencies – see Salamon, Chapter 5) and between practices and arrangements (e.g., in Chapter 6, Francisco's concept of a trellis of practices that support learning), and what this means for those wanting to effect change (see Wilkinson, Chapter 10). In this way, the chapters collectively contribute to our understanding of practices *as practices*. In addition, various chapters challenge readers to think differently about practice in a more general sense by raising questions about what practice might look like when it is enacted as praxis (e.g., Wilkinson, Chapter 10; Mahon and Galloway, Chapter 11; and Green et al., Chapter 7); what is real, and not real (Hopwood, Chapter 4; and Pennanen et al., Chapter 12); what is visible and not visible (Pennanen et al., Chapter 12); and how practices are co-produced (for instance, by teachers and learners in formal educational settings – Edwards-Groves and Grootenboer, Chapter 2; Salamon, Chapter 5). All of these questions have implications for the practice of researching practice, a topic brought explicitly into view in Chapter 12 (Pennanen et al.), but relevant to all of the research discussed in this book.

Concluding Remarks

Much can be learned about the theory of practice architectures and its possibilities from seeing the diverse ways in which the theory has been put to work (and reworked) in this volume. In light of our reading of the chapters as a collection, we have arrived at a number of observations. First, it is evident that the theory serves as a valuable theoretical, analytical, and transformational resource for exploring education and professional practice. Second, it is clear that the theory is historically and theoretically situated. It is rooted in particular intellectual traditions (including the relatively new tradition of practice theory), and continues to be grounded in the scholarly work of a particular research community interested in praxis in the professions and in education. Knowing something of the theory's history and development can help people think critically about the theory and its use. Third, the volume has demonstrated that the theory can complement a range of research methodologies. Fourth, the collection demonstrates that the theory yields interesting insights about practice when put into conversation with other theories, as Nick Hopwood has done in Chapter 3 using Baudrillard's ideas, and as Lill Langelotz has done in Chapter 8, with Foucault. Finally, as is evident in this book, and especially in Chapter 14, the theory of practice architectures is a work in progress. It is being refined and extended as the developers of the theory and their colleagues work with it to explore new practical challenges.

Through the case chapters in this volume, readers learn about specific fields, specific sites, specific practices, and the implications for specific practices of par-

ticular conditions (including the practice of researching practice). Together, the case chapters help us to learn about practice more generally and provide us with a keener sense of the complexity of practice in general as well as about specific kinds of practices. Together, the case chapters also illustrate the complex webs of relations that practices form with other practices, as well as the complex enmeshment of practices and practice architectures. Through such insights, we see how practice architectures (which may include other practices) make the enactment, continuation, and transformation of certain practices possible – and how they make the enactment, continuation, and transformation of other practices unlikely or impossible.

In our globalised world, where good ideas travel quickly, the theory of practice architectures is travelling. The chapters in this book are based on research undertaken in Norway, Australia, Finland and Sweden, more or less rooted in local intellectual traditions. We are aware that others are using the theory in the Caribbean, Colombia, Japan, the Netherlands, Spain, and other parts of Europe, and we look forward to future publications that report their findings. Like any social theory, the theory of practice architectures is refracted in new ways as it travels from country to country, encountering other locally prominent theories and other local intellectual traditions. Similarly, it is refracted differently as it travels across disciplines and professional fields. The cases in this book have used the theory to explore various kinds of practices in settings including work-based learning, early childhood education, primary education, secondary education, adult and vocational education, and higher education. This is not surprising, since many of the developers of the theory of practice architectures work in education. We are aware, however, that the theory is being used in research in a variety of other disciplines, including medicine.

The world is in a period of extraordinary change, culturally, economically, environmentally, socially, and politically. Clearly, education faces immense challenges as it prepares rising generations to be citizens in a sometimes unsettling present, and a future that may be very different from the present world. It is also becoming evident that the crises of climate change and sustainability will place unprecedented demands on practitioners in all fields of professional practice. As cultural, economic, environmental, social, and political conditions change globally, practitioners in all professions will see taken-for-granted conditions change. The practice architectures that sustain current forms of professional practice will be eroded and transformed, straining existing forms of practice. New forms of practice will emerge, sustained by new practice architectures. It will not only be the practitioners of professional practices who produce these new practices and new configurations of practice architectures; clients, other stakeholders, politicians and civil societies will also play roles in the contests over emerging forms of professional practice and the practice architectures needed to sustain them. It nevertheless seems to us that practitioners of the professions have crucial roles in helping to shape the future of the professions and professional practice; they have special roles in advising and informing others, including legislators and policy-makers, because of their professional experience, and their special insights into the nature and consequences of their practices, and the practice architectures that (are needed to) make them possible.

In times of unprecedented change like the coming decades, professional practitioners in every field will need resources that can help us meet these challenges. This volume shows that the theory of practice architectures is one such resource. Using the theory descriptively, interpretively, and critically gives insights into the practice architectures that now hold our everyday professional practices in place, and thus provides insight into the conditions that will be necessary to transform and sustain our practice in an uncertain future. More than this, the theory may help us work out how to maintain and sustain professional *praxis* – informed, committed action that makes histories – into an uncertain future.

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Ingrid Henning Loeb is an Associate Professor at the Department of Education, Communication and Learning at the University of Gothenburg. Her research area covers teaching and learning in vocational programmes in Swedish upper secondary education, teaching and learning in alternative education and in adult education. Her research publications include both policy studies and field studies in educational settings. Concepts from the theory of practice architectures are important tools for analyses in her academic work. Ingrid is a member of the Pedagogy, Education and Praxis international research network.

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Nick Hopwood is a Senior Lecturer in the School of Education at the University of Technology Sydney. He has been researching learning, education, and practice for over a decade, in schools, universities, workplaces and health settings. Generally adopting qualitative methodologies, with a strong interest in ethnographic approaches, his research seeks to understand processes of learning as they unfold in these diverse settings. Nick draws theoretical inspiration from a range of sources including Schatzki and others taking up the so-called 'practice turn', Vygotsky and others extending the contemporary cultural-historical tradition. Through empirical analysis he brings these ideas into dialogue with varied practices of learning, and other theoretical traditions including critical geographies, post-Cartesian writing about the body, new feminist materialism, and (in his chapter in this volume), Baudrillard. Nick is author of over forty journal articles and scholarly book chapters, and four books. Most recently he published *Professional Practice and Learning: Times, Spaces, Bodies, Things* (Springer, 2016) and edited *The Body in Professional Practice, Learning and Education: Body/Practice* with Bill Green (Springer, 2015).

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Stephen Kemmis is Professor Emeritus in the Research Institute for Professional Practice, Learning and Education (RIPPLE) at Charles Sturt University, Wagga Wagga, Australia. He is co-author with Wilfred Carr of *Becoming Critical: Knowledge, Education and Action Research* (London: Falmer, 1986) and, with Robin McTaggart and Rhonda Nixon, of *The Action Research Planner: Doing Critical Participatory Action Research* (Singapore: Springer). His recent writings on practice theory and the theories of practice architectures and ecologies of practices include Kemmis, S., Wilkinson, J., Edwards-Groves, C., Grootenboer, P. and Bristol, L. *Changing Practices, Changing Education* (Singapore: Springer, 2014). Stephen was one of the co-founders of the Pedagogy, Education and Praxis international research network, and continues to be a member.

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Lill Langelotz is a Senior Lecturer in the Faculty of Librarianship, Information, Education and IT at the University of Borås in Sweden. She is the Head of the Department of Educational Research and Development with a focus on staff development and the Masters program in Education. Her main research interests are in the field of teachers' professional learning, educational practices, inclusion and higher education. She is part of the research program Research and Capability in Inclusion and Welfare (RCIW) and a member of the international network Pedagogy Education and Praxis (PEP).

Annemaree Lloyd
Professor Annemaree Lloyd has worked in vocational and higher education institutions in Australia since 2002. She is currently a Professor at the Swedish School of Library and Information Science, University of, Borås, Sweden where she leads the information practice research group. Her research explores the interconnection between people, information and practice. Her research program has two strands. The first focuses on concepts of practice and landscape in the context of workplace information practices, information and digital literacy, embodied learning, and communities of practice. The second strand focuses on the relationships between information practice, information resilience, and social inclusion. She has been recognised for her research and scholarship through the receipt of a European Commission Erasmus Mundus Scholarship and Research Excellence Award. She has been a research fellow in RIPPLE (Research Institute for Professional Practice, Learning and Education), Charles Sturt University, Australia.

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Kathleen Mahon is a Lecturer in the Faculty of Librarianship, Information, Education and IT at the University of Borås in Sweden, and an Adjunct Research Fellow at the Research Institute for Professional Practice, Learning and Education, Charles Sturt University, Australia. She has taught in universities, secondary schools and outdoor education centres in various Australian states. Kathleen is a member of the Pedagogy Education and Praxis (PEP) research network and is actively involved in cross-national projects related to teacher education and higher education. Her research interests include educational and research praxis, higher education pedagogy, the professional learning of teachers, and practice theory. Kathleen's doctoral research examined how critical pedagogical praxis is nurtured in higher education.

Nicole Mockler
Nicole Mockler is based in the Faculty of Education and Social Work at the University of Sydney in Australia. She is a former teacher and school leader, and the current focus of her research and writing relates to the politics of education and teacher professional identity and learning. Her recent books include *Engaging with Student Voice in Research, Education and Community: Beyond Legitimation and Guardianship* (with Susan Groundwater-Smith, Springer 2015), and *Facilitating Practitioner Research: Developing Transformational Partnerships* (co-authored with Susan Groundwater-Smith, Jane Mitchell, Petra Ponte and Karin Rönnerman, Routledge 2013). Nicole is currently an Associate Editor of *Critical Studies in Education* and *Teaching and Teacher Education*, and Communications Co-ordinator for the Australian Association for Research in Education.

Matti Pennanen
Matti Pennanen is currently working as a doctoral student in the Faculty of Education at the University of Jyväskylä, Finland. His dissertation will cover the theme of mentoring practices and the theoretical frame is founded in practice theory and the

theory of practice architectures. Future interests will be investigating collaborative practices of teachers and other stakeholders.

Andi Salamon
Andi Salamon recently completed her PhD in the School of Teacher Education, Charles Sturt University, Australia. Andi has worked with young children aged from birth to 9 years old for over 20 years. She worked in early childhood education settings in the Blue Mountains and Sydney as an Early Childhood Teacher and Director prior to undertaking her doctoral studies. While working in an infant and toddler program in Sydney, Andi led a team of early childhood educators participating in the trial of Australia's first national curriculum framework for early childhood education, *Belonging, Being and Becoming: The Early Years Learning Framework for Australia*. She is currently working part time as the Grants Officer at an integrated early childhood organisation in Sydney, and teaching part time at Charles Sturt University, and the University of Sydney where she is preparing students for their first practicum with infants and toddlers in early childhood education settings.

Ela Sjølie
Ela Sjølie, PhD, is Associate Professor of Education at the Norwegian University of Science and Technology (NTNU), working in the area of teacher education. In 2014, Ela completed her doctoral thesis titled: "Pedagogy is just common sense: A case study of student teachers' academic learning practices". Her research interests include student learning in teacher education, as well as student learning in higher education more broadly. Ela is involved in several international projects and networks. Her international work focusses particularly on practice theory and action research, and university-school partnerships in teacher education. Ela is a member of the Pedagogy, Education and Praxis international research network.

Jennifer Sumsion
Jennifer Sumsion is Foundation Professor of Early Childhood Education at Charles Sturt University, Australia, and Director of CSU's Research Institute for Professional Practice, Learning and Education. She was also co-Director of the Australian Government-funded Excellence in Research in Early Years Education Collaborative Research Network (2011–2015). She has long-standing research interests in professional practice in teacher education and early childhood education and has published widely in these areas. More recently, her interests have extended to the contexts and practices of research leadership.

Lena Tyrén
Lena Tyrén, PhD, is a Senior Lecturer in the Faculty of Librarianship, Information, Education and IT, and Head of Department of Pre-School Teacher Education, at the University of Borås, Sweden. Her research interests are concerned with participatory research as an arena for professional development, school improvement, knowledge development, and collegial learning. She is interested in collaborative

research approaches such as action research. Lena's doctoral thesis explored three research areas. The first area was the teachers' opportunities to promote pupils' writing and reading with the computers as a tool in relation to IT and in relation to policy and political reforms. The second area was action research as an arena for professional change and development and the opportunities and needs of research methodology. The third area was how schools, teachers, pupils, and the teaching involved were affected by reforms and various policy changes.

Jane Wilkinson

Jane Wilkinson is an Associate Professor of Educational Leadership at Monash University, Melbourne, Australia and Convenor of the Australian Association of Educational Research's Educational Leadership Special Interest Group. Jane has published widely in the fields of practice theory, praxis and leadership; gender and leadership; and refugee education. Jane's publications include *Professional Development: Education for All as Praxis* (Routledge, 2016); *Changing Practices, Changing Education* (Kemmis, Wilkinson, Edwards-Groves, Hardy, Grootenboer, and Bristol) (Springer, 2014) and with Tanya Fitzgerald of *Travelling Towards a Mirage? Gender, Leadership and Higher Education* (Post Pressed, 2010). Jane has been a visiting scholar at the Universities of Gothenburg, Sweden; Tromso, Norway; Jyväskylä, Finland; and the Universities of Manchester and Nottingham, England. She is a member of the editorial board, *Journal of Gender Studies* and an Assistant Editor of the *International Journal of Leadership in Education.* Jane is a member of the Pedagogy, Education and Praxis international research network.

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