Chapter 3
Learning as Being 'Stirred In' to Practices

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Abstract This chapter provides a 'societist' (Schatzki in Philos Soc Sci 33(2):174–202, 2003) account of 'learning' using the theory of 'practice architectures' (Kemmis and Grootenboer in Situating praxis in practice: Practice architectures and the cultural, social and material conditions for practice. *Enabling praxis: Challenges for education*. Sense, Rotterdam, pp. 37–62, 2008; Kemmis et al. in *Changing education, changing practices*. Springer Education, Singapore, 2014). Drawing on observations of classrooms, schools and a school district, the authors argue, first, that people 'learn' practices, not only 'knowledge', 'concepts' or 'values', for example. They suggest that learning a practice entails entering—joining in—the projects and the kinds of sayings, doings and relatings characteristic of different practices. The metaphor that learning involves being 'stirred in' to practices conveys the motion and dynamism of *becoming* a practitioner of a practice of one kind of another, like learning or teaching. Being stirred into practices sug-

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P. Grootenboer et al. (eds.), *Practice Theory Perspectives on Pedagogy and Education*, DOI 10.1007/978-981-10-3130-4_3

gests an account of 'learning' that elucidates the process, activity and sociality of learning as a practice.

In their book *Changing Practices, Changing Education*, Kemmis et al. (2014) controversially proposed that:

> learning is *always* and *only* a process of being stirred into practices, even when a learner is learning alone or from participation with others in shared activities. We learn not only knowledge, embodied in our minds, bodies and feelings, but also how to interact with others and the world; our learning is not only epistemologically secured (as cognitive knowledge) but also *interactionally secured* in sayings, doings and relatings that take place amid the cultural-discursive, material-economic and social-political arrangements that pertain in the settings we inhabit. Our learning is bigger than us; it always positions and orients us in a shared, three-dimensional—semantic, material and social—world. (p. 59; emphases original)

This view is provocative in departing from a psychological view of learning as a process by which learners acquire knowledge, for example by the transmission of knowledge from a person or text to another person. It aims to complement a psychological view, first, with a 'societist' (Schatzki 2002) view of learning as secured in interactions between a learner and other people and things in the world; and, second, with an ontological perspective that focuses less on the *epistemological* concern about the *knowledge* people acquire than on the changes that can be observed in their activities and practices.

In *Changing Practices, Changing Education*, Kemmis et al. (2014) report on their multi-year study in several Australian primary schools, in which they observed learners (students and teachers) participating in classroom or professional development projects and activities in ways that revealed that nothing was being 'transmitted' in the learning they observed. In fact, what was observed, rather, was people coming to participate in language games, activities and practices shaped by the arrangements the learners encountered in the semantic, material and social dimensions of the world they inhabited in lessons or in professional development activities. Whilst in many ways, these observations broadly align with well-described socio-cultural perspectives on learning like that of Vygotsky (Wertsch 1985), Kemmis et al. (2014) concluded that learning is interactionally secured in the process

> … through which people, perhaps tentatively or as novices, enter the sayings, doings and relatings that hang together in the project of a practice and, by practising, explore the enablements of and constraints on interaction characteristic of that practice, and become more adept in interacting with others and with objects in the world through it. (p. 59)

In this sense, then, this is a view that throws into doubt some conventional views about 'learning' and 'knowledge'. By taking a particular kind of practice perspective, it offers a view of learning as a social practice, not solely as a psychological process.

From observations of students participating in their lessons and teachers participating in their professional development, the metaphor of being '*stirred in*' (as described by Kemmis et al. 2014, pp. 56–61) seems aptly to convey the motion and dynamism of becoming a practitioner of a practice of one kind or another. Being stirred into practices suggests an account of 'learning' that elucidates the process,

activity and sociality associated with coming to do something new. As Kemmis et al. suggested, people encountering and engaging a new topic or field of practice (sometimes tentatively and with difficulty) can be observed being drawn in or stirred into the practice not only by a teacher or leader but on their own volition and by others with whom they participate. In this sense, learning in many social, educational and organisational settings can be thought of as a process of co-production that occurs through co-participation with others and the world in the unfolding of the practice as it happens in physical space-time. Kemmis et al. (2014) thus bring the ideas of 'learning' and 'practising' together. On this account, it seems to us that the reason 'learning' and 'practising' *appear* to be distinct is that for many decades learning has been discussed as if (a) learning were *a process separate from* the practice of doing something (including 'knowing' something and thus being able to participate in language games about that topic), and as if (b) the '*product*' of learning (usually regarded as 'knowledge' or 'concepts' or 'values') could be regarded as having a relatively enduring (in short or long term memory) existence *separate from* the lived and embodied capacity to go on in an activity, language game, or practice. As the empirical evidence we will offer shows, this common view now seems to us to be a mistaken way of viewing things.

This chapter aims to give empirical substance to this more sociological account of 'learning' using the resources of the theory of practice architectures (Kemmis and Grootenboer 2008; Kemmis et al. 2014). This theory holds that practices are prefigured by practice architectures composed of the cultural-discursive, material-economic and social-political arrangements found in particular sites. As they are encountered, these architectures enable and constrain how practices unfold, moment by moment.

To illustrate how learning is understood from the perspective of the theory of practice architectures, the chapter draws on empirical material collected in primary schools in two Australian school districts: principally interviews and observations in classroom lessons. The larger study from which this evidence is drawn explored ecological relationships between particular practices of learning, teaching, professional learning, leading and researching, as seen through the lens of practice theory and philosophy.[1]

Here, we explore the ways that learning happens in practices, through individuals' agency and actions, and amidst the cultural-discursive, material-economic and social-political preconditions that make their practices possible. This view of practices enables learning to be described and interpreted in new ways, offering surprising insights into learning and coming to know. While it might be regarded as extending Richard Peters' (1964) view of education as 'initiation' into forms of knowledge, we think our view is conceptually compatible with the view of Smeyers and Burbules (2006) that education is an initiation into practices, or the view of Lave and Wenger (1991) that learning in organisations occurs through 'legitimate peripheral participation' (p. 27) in work in a site. We aim to extend these views

[1]For a fuller account, see Chap. 4 (pp. 55–91), 'Student Learning: Learning practices', in Kemmis et al. (2014).

about knowing and learning by considering the historical prefigurement of practices and the ontological conditions that hold 'learning' in place: the ways in which a practice is made possible and held in place by practice architectures. Following Kemmis et al. (2014, especially pp. 56–61), we aim to illustrate how initiation into practices occurred in some cases we observed. Following Wittgenstein (1958), we show how learning occurs as a process of 'coming to know how to go on' in practices, or, as we observed it in student learning in classrooms, and teacher learning in professional learning settings, as a process of being 'stirred in' to practices.

Learning as Being '*Stirred In*' to Practices

According to Kemmis and Grootenboer (2008) learning a practice entails entering —or joining in—the *projects* and the kinds of *sayings*, *doings* and *relatings* characteristic of different practices. When people 'learn' practices that are new *for them*, it might be said that they are initiated into these practices (Smeyers and Burbules 2006), or that they initiate themselves into the practices, with the co-participation of others—for example through 'legitimate peripheral participation' in the practice (Lave and Wenger 1991, p. 27). However, in our observations of teachers and students in the moments of 'learning', we saw them as participants more or less tentatively *entering* new (for them) practices that already existed (for example, as a practice already known by a teacher or fellow-learner). The notion of 'initiation' seems to imply a more or less deliberate ritual knowingly entered into by the one being initiated and the one doing the initiating. Being 'stirred in', by contrast, seems to us to imply much more happenstance in the process, in which the learner is somewhat adrift but also being caught up in the vortex of an activity that already has some shape, and that is held in place by the arrangements (practice architectures) that channel it. The metaphor of being *'stirred in'* is intended to convey the motion and activity associated with accomplishing practices in physical space-time, along with the idea that some things are already present to make the doing of the practice possible.[2]

The following example of being stirred in is based on a focus group interview with six Year 6 students. The students are discussing how they have learned to use Keynote digital presentation and GarageBand musical composition software on the Mac computers at their school. They think the new software has helped them in their learning.[3]

[2]We concede that the metaphor of 'stirring in' suggests that someone, a teacher, say, does the 'stirring' while someone else, a student, say, is 'stirred in' to a practice. Despite this limitation of the metaphor, we want to assert that people can also 'stir themselves in' to practices that are new for them simply by imitating others, or by 'legitimate peripheral participation' (Lave and Wenger 1991, p. 27), or by reading a book, for example.

[3]B is a Boy, G is a Girl, Q is one of the interviewers.

G: I think most things have changed for the better and we now have Macs with new programs like 'Keynote' and things that make it easier and more beneficial programs for our learning.
Q2: How does Keynote work?
G: Keynote is PowerPoint pretty much and you have—make a slideshow except it has more things on it, like it has different/
G: /Transitions and animations.
G: And there's a program that's called 'GarageBand' and you can create pod-casts and music and –
… ((All talking))
G: And the teacher just lets us … at the end of the term the teacher lets us choose a way that we want to present our HSIE [Human Society in Its Environment] topic, on computer or on a poster or whatever.
Q: So do you like having to choose your own way?
G: It's better to have free rein because you might really not want to do something but you have a really good idea that you want to do but you're not allowed to -
… ((conversations continues))
G: I personally like the old computers better than the new ones because I'm not very good at adapting to the changes in computers and things.
B: Like you've had these sorts of technology for so long and you get this new sort and you're like, 'Oh, what do we do here?'
Q: How do you learn it? Because that's/
G:/Well, we have a teacher, Miss G//
B://We've got like Miss G that comes from the … [regional teacher consultancy support office] and teaches us about them.
G: She puts her computer on the smart boards and she shows us how to do it.
G: She gives us examples while we're at our desks and we can copy what she does.

These students are telling us how they get *stirred in*to new (for them) practices of using software programs like Keynote or GarageBand to make presentations. As they talk about learning to use the new software (to include animations and pod-casts in their digital texts for example), they are being oriented to the ways they come to 'know'. Specifically, their comments stating how they are 'shown', 'adapt to the changes', 'copy what she does', that the 'teacher just lets us', that they have 'free rein' indicate their view that learning is a process of being drawn into the practice of presenting their work using new technology. In the doing of the practices associated with 'learning' these applications, these students are joining in through doing and participating—although tentatively at first. This evidence reveals interpretive categories used by participants to describe their learning that we think justify our use of the metaphor 'being stirred in'.

Miss G, it turns out, also talks about how this group of Year 6 students learns by trying things out in periods of free practice and experimentation that she calls 'sandpit time'. In describing how she works with students to draw them into new practices, she also uses interpretive categories (like 'sandpit time' and 'practising themselves') that further justify our use of the metaphor 'being stirred in':

> I work with … [the students] on Keynote or GarageBand … and then the kids go off and have 'sandpit time' (because we're not allowed to have 'fun at school', we have 'sandpit time') [and the] kids like that, so they say "Oh, sandpit time!", and the way it's set up … is that they're off doing what they're practising themselves. Then they have to be prepared to come back and share one thing that they feel confident enough to share with someone else.

Here, Miss G is suggesting the interconnectivity between participating in practices (as the students do in 'sandpit time') and learning (as practising something until they are more confident in it—something the students' teacher also allows them to do, as we saw in the student excerpt above). It appears that, for Miss G, practising, learning, participating, doing and sharing are entwined with one another. She continues in her observations of these students as becoming highly effective in new practices through practising, commenting: 'What I do know is that they're, within the classroom, the kids are highly functioning and literate with what they're doing now…'

Students, too, are remarkably articulate about how they see themselves developing, in terms of learning from one another. Asked about whether, in the second term of a four-term year, they were becoming more confident in their skills of presenting to the whole class, one student in a Year 5 focus group responded this way:

> I reckon it's sort of like a second chance to improve your presentation skills. Like first term we sort of … like I felt like I really didn't sort of know what I was doing. Like I just get in there and do it. And like with our inquiry, each term we usually have to do a presentation at the end and first term it was sort of the same thing. [In second term] It was like a chance to show them what you've learned with your other presentation skills and watching like your other friends when they're presenting and learn things off [= from] them.

We interpret such cases in terms of students (and teachers) being 'stirred in' to new practices not only by the teacher but also by fellow-students. For the students, learning happens by 'just get[ting] in there and do[ing] it' and 'watching … your … friends' in the sequential moment-by-moment enactment of a lesson as the past encounters the present and envisages a future, in the particular site of their learning; for them, these are overlapping. We see them engaging with a new topic or field of practice and being 'stirred in' to the practice through participation. They are 'stirred in' to what makes the practice coherent as an overall activity or project of a particular kind, and into the different and varying kinds of activities that together constitute the practice under varying kinds of conditions and circumstances.

But it is not only through their own agency and activity that students are stirred into practices; the practices they are learning are made possible and held in place by practice architectures—the cultural-discursive, material-economic and social-political arrangements that prefigure the practice in (respectively) semantic space, physical space-time and social space. As they encounter them, the students are channelled by these enablers and constraints as they try out the practice, and find how to 'go on' in the practice amidst them. In Wittgensteinian (1958) terms, they learn how to go on in the practice—in the language of the practice, the activities of the practice, and in relating to others and the world in the practice.

As they learn, (to use Ryle's 1946, 1949, distinction between 'knowing how' and 'knowing that'), people are finding out *how* to do a practice; as an after-effect, they also come to understand *that* they can do it (inasmuch as they can avow something about it; Winch 2009) and *that* certain knowledge, concepts or values may be associated with it, or 'in play' when this practice is being practised.

When someone asserts that a learner has learned some 'fact' or 'concept' or item of 'knowledge'—*what* that person learned—we now find ourselves compelled to ask *how* they learned it. Our central claim is that *what people learn is how to go on in practices*; we thus observe learners learning to discover how they learn go on in the sayings, doings and relatings that constitute these practices. In our observations, we try to see beyond the 'fact' or 'concept' or 'knowledge' particular learners learn, to discover the language games, the forms of life and the practice architectures in which these 'facts' or 'concepts' or items of 'knowledge' are grounded. Several centuries of 'the philosophy of the subject' (Habermas 1987a, b) have led us to think of knowledge as inscribed in our minds or memories—as the trace left behind by our having learned X or Y or Z, and then to think of this knowledge as an object we perceive as cognitive subjects who do this 'knowing'. By asking *how* a person learned X or Y or Z, however, we can discover how this knowledge is *grounded* in practice. We can discover what practice or practices it arises from, and recalls, and what future practices it anticipates and returns to its use in.

We came to the notion of being stirred into practices by interpreting the particular words our informants used—whether teachers, students or consultants to schools. As we saw, Miss G says 'they're off doing what they're practising themselves'; the Year 5 student says it involves processes like 'watching … your other friends when they're presenting and learn things off them'. Another teacher says 'it was a real conscious effort to develop that skill of being able to collaborate…'. They do not use the words 'stirred in', but they nevertheless point us towards what we interpret as being 'stirred in'. In short, being 'stirred in' is what happens when people, perhaps tentatively or as novices, enter the sayings, doings and relatings that hang together in the project of a practice. In their tentative practising, they experience and explore the practice architectures that enable and constrain their interactions in the world as they practise, with the result that, ordinarily, they become more adept in interacting with others and with objects in the world through the practice. And what they learn, we claim, is *how to go on in language games, activities, and practices*.

Learning as *Coming to Know How to Go on* Amidst the Practice Architectures of the Practice

In another class, we observed Year 5 students in a lesson about forces and processes changing the Earth (including, for instance, deforestation and drought). We saw students participating in particular practices, and while some (including their

teacher) might interpret the students to be learning particular *concepts* like 'climate change', we (by contrast) interpreted what was happening in terms of students being stirred into the particular sayings, doings and relatings (of their practice) so that they could 'go on' in the language games, activities and practices of the lesson. They were coming to know how to speak a particular kind of language—to enter a particular kind of discourse—about forces changing the earth, including discussing topics like deforestation, and using notions like 'climate change' in their talk and texts. This lexicon of words formed a prominent part of the cultural-discursive arrangements that enabled and constrained the practice of talking about forces changing the Earth in this classroom. In Wittgensteinian terms, they were entering, and orienting themselves in, a *language game* about 'forces changing the Earth', and a language game about how to use the words 'climate change' in ways recognisable to other people using these words. And so, as the students entered the project of making a digital presentation about forces changing the Earth, they demonstrated the extent to which they had begun to master the language game of speaking about forces changing the Earth—a language game in which it is reasonable to say particular things in particular ways, in which meaning and sense come from shared orientations among interlocutors towards particular themes and topics, using this specialist discourse.[4] Through their talk in the lesson, we observed students being drawn into new sayings (ways of saying things) about ecology and the environment.

We thus concluded that the students were entering the practice by *coming to know how to go on* (Wittgenstein 1958, §151, §179) in a particular language game which involves discussions and descriptions and explanations and arguments about matters like 'climate change', 'deforestation', 'environmental sustainability' and 'forces changing the earth'. In particular, we observed the work of these Year 5 students as distributed through and across their interpretation of several different types of texts and activities in order to produce texts of their own, including visual texts, digital texts, written texts and oral texts. The appropriation, use and production of such texts is an instance of a classroom and school language game and form of life by now familiar to many if not all of the students, although, when they began, the particulars of the task of reading and reporting had been in some ways new to them.

In addition to coming to know how to go on in this new language game about forces changing the Earth, the Year 5 students we observed were simultaneously coming to know how to go on in other *activities* like making digital presentations, constructing particular kinds of texts, and working together in groups. They came to know how to go on in a wide range of *sayings*, *doings*, and *relatings* that together composed the practice of this particular inquiry lesson at the time. They also came to know how to go on amidst the *practice architectures* (Kemmis and Grootenboer 2008; Kemmis et al. 2014) that formed the enabling preconditions that made their

[4]Kemmis et al. (2014, p. 70, Fig. 4.1), show a photograph of a long vocabulary list from this classroom, including words like 'carbon', 'energy', and 'greenhouse effect'.

particular practices possible, and enabled and constrained the unfolding of the practice in its course, namely:

(a) *cultural-discursive arrangements* that enabled and constrained the practice (in the medium of language and in the dimension of semantic space), that is, the characteristic language and discourses used in talking about forces changing the Earth;
(b) *material-economic arrangements* that enabled and constrained the practice (in the medium of activity and work, in the dimension of physical space-time), that is, the characteristic kinds of activities undertaken in the course of (for example) constructing a digital presentation about forces changing the Earth; and
(c) *social-political arrangements* that enabled and constrained the practice (in the medium of power and solidarity, and in the dimension of social space), that is, the characteristic patterns of relationships between students and between the students and their teacher, and between them and the non-human objects present.

In our view, coming to know how to go on in a practice means not only coming to know how to go on *in* the sayings, doings and relatings, of the practice, it also means coming to know how to go on *amidst* the practice architectures that enable and constrain. What the learners learn to say and to do, and they ways they learn to relate to others and the world in such cases, is not only formed by the intentions of the learners; the practice architectures in the setting also channel or canalise the learners' practices into the forms in which we observe them. Schatzki (2002) describes the relationships between practices and arrangements in terms of 'practice-arrangement bundles'; like Schatzki (2002), we think that '[b]ecause the relationship between practices and material entities is so intimate, … the notion of a bundle of practices and material arrangements is fundamental to analysing human life' (p. 16).

On the basis of our observations of students learning in lessons like this one, then, we have come to the view that *learning* is no more than coming to know how to go on in practices, and that it occurs by being 'stirred in' to practices (including by stirring oneself into them by joining in). This view disrupts some views of learning that see it as a *psychological* process, that occurs '*in the mind*', and that see learning principally from an *epistemological* viewpoint. In contrast to the psychological view, the view we have described here offers a '*societist*' (Schatzki 2003) account of learning that sees it as something that occurs in the *intersubjective space* between people, in terms of initiation into, or being stirred into, practices, and that sees learning principally from an *ontological* perspective. The intersubjective space in which learning occurs is three-dimensional: it exists in the media of language, work and power/solidarity, in which we encounter one another in the world, in (respectively) semantic space, physical space-time, and social space. This is not to say that the intersubjective view eschews the psychological view. It does not. Rather, it aims to locate the psychological within the social, in the same way

that the subjective is located in the intersubjective. In our view, then, we come to know anything, including ourselves as cognitive subjects, in the shared medium of language, in a shared material world, and in shared social spaces. The subjective and intersubjective are dialectically related. By offering a societist account of learning, we aim to locate the subjective in the intersubjective, and the epistemological, at least as it pertains to people's own knowledge, in the realm of the ontological—the historical and material world of practice architectures (arrangements) to be found in the real sites in which we act, in which we encounter one another, and in which we develop—by learning, for example.

We next make a brief excursus to distinguish two types of practices we ordinarily encounter in social settings like schools and other organisations where learning is a prominent part of what happens in the site: 'learning practices'[5] and 'substantive practices'.

Being Stirred into 'Learning Practices' and 'Substantive Practices'

In a Kindergarten lesson, we observed two teachers (team teaching) preparing kindergarten children to build outdoor ornaments that the next day would be subjected to 'rain' (in fact, water from a sprinkler) in order to discover different 'properties of materials'. This involved preparing them to participate in a complex of reciprocal interactions involving two main school-type 'social projects' that were both necessary for the successful accomplishment of the lesson. First, the teachers were stirring the children into 'how to participate' more generally in school lessons; this is evident in the lesson excerpt below where the teachers are orienting the students to 'put your hands up' to indicate they have an answer, to interact with others by 'sharing and using nice words' and to 'managing impulsivity' by sitting differently [note: all names are pseudonyms]:

Teacher 1: Put your hand up if you can tell me what this one is, and what it means? [Teacher points to a behaviour prompt card; points to a student to respond.]
Charity: Working Interdependently (children talking over each other) …
Teacher 1: … That's right, what does that mean?
Charity: …. [Helping]

[5]Kemmis et al. (2014, p. 55) make the distinction between 'learning practices' and 'substantive practices'. A *learning practice* is a practice whose project is to help people learn (like interacting with others, taking turns in conversations, listening, or web-searching).A *substantive practice*, by contrast, is the practice to be learned—a practice whose project is to be able to do something in the world (for example, practices like reading a factual text about rainforests, reciting poetry, making a speech, building a Lego tower, or the practice of critiquing practices of schooling). In formal learning settings, learning practices and substantive practices frequently overlap and intertwine.

Teacher 1: Helping other people. What else does it mean? Finn? He's got his hand up.
Finn: It also means share and don't … –
Teacher 1: That's right, sharing and using that, nice words to each other, could I please have that when you're finished. [Teacher wanting to remove object from child who is fiddling.] Let's move on to this one//
Teacher 2://Oh let's, who's doing that right now, let's see who is doing it…
Teacher 1: Nate is.
Teacher 2: Well done.
Teacher 1: So it's called managing/
Teacher 2:/Show us what your body looks like, when you're Managing Impulsivity. Wow, show us what your lips look like, even when you're listening and managing [your impulsivity], … [Students moving to sit differently.] Fantastic.

As the students complied, they co-constructed the reciprocal and interactive practices deemed appropriate for completing this lesson; that is, they were being stirred into participating in particular practices of learning or *learning practices* (Kemmis et al. 2014, p. 68). They demonstrated comprehensibility *in knowing how to participate* in the practice of interacting in class, by doing it as requested.

In the next part of the lesson introduction (below), the teacher stirred students into the *substantive practice* of identifying properties of objects and designing and building a garden ornament (Kemmis et al. 2014, p. 65) which is inevitably intertwined with the *learning practice* of listening to others in a class discussion. The teacher 'tuned the students in' (or stirred them in) to the 'doings' (the activity), the 'sayings' and language required to participate in the task (including in this case, using ideas like 'waterproof', 'properties', 'metal' and 'rusty'), and the appropriate 'relatings' (when to respond individually and when to respond collectively when asked a question):

Teacher: It is waterproof, and does it need to be waterproof to be an outdoor ornament? [Teacher is holding up a metal duck garden ornament.]
ALL: Yes.
Teacher: Why?
Charity: So it doesn't break.
Eli: So it doesn't break anymore—the properties won't change. [Children talking over each other.]
Teacher: Alright, what do you mean by that Eli, the properties won't change, what do you mean?
Eli: If water gets on it, if it was made of paper and the water gets on it, it would rip.
Teacher: Will this rip?
ALL: No.
Teacher: Because it's made from?
ALL: Metal.
Teacher: Will this rip? [Holds up the metal duck.]
ALL: No. [Chorus.]

Teacher: Because it's made from?
ALL: Metal. [Chorus.]
Teacher: And the only property that may change Rhett, is that it could become … ?
Rhett: Rusty.
Teacher: Rusty outside… [Several turns later.]
Teacher: Your task today is to make an outdoor ornament

As this group of Kindergarten children was stirred into building outdoor ornaments, through this and the following lesson the next day, they came to know 'how to go on' in the activities of planning and constructing, relating with others appropriately, and using technical language as necessary.[6] As they did so, their substantive practices began to 'hang together' in an authentic project to which the students developed a commitment through the introduction to the lesson. For instance, in the realm of language, through particular sayings, students were drawn into discourses associated with properties and building; in the realm of activity, through particular doings, they were brought into identifying properties of materials, and into constructing and building by doing the construction task; and in the realm of sociality, through particular relatings, they related in particular ways to each other, the teacher and various material objects, as they went about their work. These students were stirred into these substantive practices through particular kinds of learning practices—and vice versa—as they unfolded in time through the particular language, activity and interactions required to make it the lesson it was.

These students were drawn into noticing, naming and reframing (Smith 2008, pp.77–78) four different aspects of the task (the broader project of the lesson). Through participating in the particular orchestrated teacher–student interactions (like the one presented above), students were also oriented to:

- the idea of 'materials' and their 'properties' (where the kindergarten children already used this technical language, as they had been previously 'stirred in' to a language game that requires these terms),
- the idea of 'outdoor ornaments' (through material objects brought from home by one of the teachers),
- the task of 'making a plan' (through activities of designing, drawing and labelling in the form of a labelled diagram), and
- the task of 'building the ornament'.

What emerged was an example of reciprocity in practices: the teacher stirring the children in to the task by leading them to understand the task of making a garden ornament and the stages in planning and making the ornament, and the children gradually being stirred in, responding individually and collectively to the teacher's directions and questions, until they had—however temporarily—a grasp of what the

[6]Of course it is not necessarily the case that that all students come to know (or come to know equally) how to go on in language games, activities and practices going on around them in their classrooms. It is frequently the case that learners resist or refuse or are too confused to enter the language games, activities and practices on offer in their classrooms.

task ahead involved and how they would complete it. It is not only a reciprocity between participants—teachers and students—but also a reciprocity between practices: the teachers' practice of 'stirring the students in' to the multilayered project of building and testing an outdoor ornament, and the students' practice of 'being stirred in' to the project. The students came to know not only how to go on in the *substantive practices* of planning, constructing and testing their garden ornaments, but also how to go on in particular kinds of *learning practices* involving mutually constructed interactions of 'working in groups', 'collaborating' and 'sharing', for example.

Knowledge and Practice

We have asserted that to take the view that learning means *coming to know how to go on* in a practice is to be at odds with some conventional views about *what* people learn as well as about *how* learning happens. Knowing is often attributed to cognition and epistemology, and people are usually said to learn things like knowledge, concepts and values embodied in our minds, bodies and feelings. In our view, however, and from the perspective of the learner as a *cognitive subject*, these things, whose existence we do not deny, are no more than 'after-images' or traces in memory of the practices to which they refer. They are the after-effects of what we see learners learning *directly*—namely, how to participate in a practice (whether they do so well or badly, roughly or smoothly, or highly idiosyncratically).

It seems to us, then, that knowledge, concepts and values exist as the after-effects of participating in practices, as traces in individual minds, that is, in human cognition. But they are not only traces in individual minds: they also crystallise into the traces and tokens that are the words and ideas that exist 'independently' of particular language users in the intersubjective space of the languages and discourses we share in our various language communities, and that endure in objectified form in written texts as well as in oral and sometimes visual form in such diverse kinds of knowledge as the stories of ancestors passed down in oral traditions, times tables, theories in physics, histories, the rules of chess and the painting style of Vincent van Gogh. 'Knowledge' is not only *in* heads, it also exists *between* them, in the intersubjectively grounded meaning of words, in the intersubjectively encountered materiality of utterances and texts, and in the intersubjectively constructed relationships between speakers and hearers, and authors and readers.

In the *Philosophical Investigations*, Ludwig Wittgenstein (1958) located *knowing* and *meaning* not in words or ideas or in the alleged correspondences of words with objects, states of affairs or events in the world, but, rather, in *language games* in which people use language in ways that orient them to the world in the

same way. In turn, he located these language games in shared *forms of life*[7] which make the language games interpretable to those participating in them—like the shared lives of people in a farming community, say, where an overlapping matrix of shared practices makes the lives of members of the community more or less comprehensible to one another.

Just as Wittgenstein located meaning in language games and forms of life, we have come to the conclusion that *all* '*knowledge*', '*concepts*' *and* '*values*' *arise from, recall, anticipate, and return to, their use in the forms of life characteristic of different practices*. We thus do not regard meaning and knowledge as somehow 'internal' to a word or the language in which the word is used, nor are they 'external', in the sense that they correspond with, or point to, something in the world.[8] Rather, they are to be found in the 'saying' and 'doing' and 'relating' of the historically and materially located 'happening' of practices in which particular words are used, and to which particular knowledge refers. They are interactionally secured in the doing of something.

Taking the view that knowledge arises from, recalls, anticipates and returns to its use in practices, then, the consummate professional teacher teaching 'consonant blends', for example, is likely to be alive to the wider, richer framework of reading and literacy practices that makes this particular corner of literacy important for her students to master. For the student, however, learning the consonant blends may just be finding out how to go on in the game of completing the tasks the teacher has set today, each of them a variation on other games in the teacher's repertoire that the student has previously encountered. The game of literacy and the game of the classroom are not necessarily at odds with one another in the practices of classroom literacy learning. Rather, the project the teacher ascribes to a particular day's lesson —like having the students learn to label diagrams for their garden ornaments—may be different from the projects all or some of the students ascribe to the activities of the classroom—perhaps something like 'getting by'. It is the game—the practice—that engages or does not engage the students in learning or finding how to go on in either or both of these games. This is the primacy of practice. It makes the ascriptions of the actors secondary to the language game and form of life that is the practice—it unfolds in what happens, not in what was intended or described or justified, although those sayings may be caught up and bundled into the doings and relatings that also make up this or that particular practice.

If people do not learn anything other than practices, then we need to consider how 'learners' are drawn into new practices, whether, for example, by observation in the form of 'legitimate peripheral participation' (Lave and Wenger 1991), or by simply allowing them to try out (practise) a new practice. It has long been known

[7]Wittgenstein (1958, p. 88[e], §241): '"So you are saying that human agreement decides what is true and what is false?"—It is what human beings *say* that is true and false; and they agree in the *language* they use. That is not agreement in opinions but in forms of life'.

[8]Wittgenstein (1958, p. 107[e], §329): 'When I think in language, there aren't "meanings" going through my mind in addition to the verbal expressions: the language is itself the vehicle of thought'.

that *active engagement* promotes learning. This does not necessarily mean active *physical* activity though it does mean active cognitive and emotional engagement in practising thinking or talking in a new field of practice and practice-knowledge (as happens when students encounter a new and interesting topic like 'rainforest ecologies', or in the practice of critical reading of websites relevant to 'rainforest ecologies'). If we want learners to learn knowledge, concepts or values—which we suggest are 'after-images' of practices—then we need to consider how to engage them, in what practices, to induce them to form those after-images. For example, one such practice is the practice of rote memorisation (like chanting times tables or memorising a song for an anticipated performance) that is an exercise aimed at preparing a learner to (re-) produce information on demand, which is to say, to participate in a practice in which such demands are made and fulfilled. Other practices that induce the formation of knowledge as after-images of doing them include reading, drawing, problem solving and conversation.

In the light of our view that knowledge arises from, recalls, anticipates and returns to its use in practices, we would encourage teachers to think about curricula as *curricula of practices*, and to ask, 'What substantive life practices do students need to learn?' and 'What learning practices will stir students into those practices?'

Learning or Practising?

We learn by engaging in practices. Frequently (but not always) this occurs when people co-produce new practices together, as they encounter one another in action and interaction. Through their encounters, people develop ways of interacting that are arranged in increasingly well-ordered or even routinised ways characteristic of the kinds of practices in which they are encountering each other (as when a teacher and students speak with one another about how to use Keynote software), or in which they encounter others and particular kinds of objects in the world (as in a practice like using computers and particular software packages to insert animations into PowerPoint presentations or building garden ornaments). What was initially surprising to us during our empirical observations is something that now seems very obvious: the particular part of 'learning a practice' that is the 'learning' is difficult to distinguish from the part that is the 'practising' of the practice—more difficult than has previously been noticed.

Our observations have led us to the view that the practices we usually call 'learning' are typically to do with particular kinds of situations (like understanding a word or idea, or how to perform a particular skill) and settings (like classrooms or conference rooms) where people are said to 'learn'. Conventionally, we *say* that people 'learn' in these situations and settings, but our observations have caused us to doubt the existence of a process or practice of 'learning' that is distinct from practising the practice (though perhaps practising it inexpertly or in a clumsy way). Indeed, like Lave and Wenger (1991) and even Dewey (1933), we think that what we call 'learning' is not a distinct process or practice in itself, but just a description

of a state that a person is in when they are not yet practising at the level of skill or virtuosity they or someone else hope/s or expect/s them to reach.

Rote memorisation (like practices of chanting and reciting poetry) might be an example of a practice of learning; learning by doing (like the examples of trial and error Year 5 students report in coming to grips with the possibilities of new computer software like Keynote) might be another; and learning by 'legitimate peripheral participation' (Lave and Wenger 1991; as, for example, when some students watch others who are more skilled and gradually enter a practice 'from the sidelines') might be yet another. In each case, however, what counts as distinctively 'the practice of learning' remains mysterious. What is 'the practice of learning' *as distinct from* practising the other 'target' practice at some stage of accomplishment? In our view, when someone says that a person is learning, they use the word 'learning' simply to refer to the person being at a stage or state in which their practice is not yet as accomplished as they, or someone else, want it to be.

To put it another way, our observations suggest that, apart from common usage, there is nothing about 'learning' that is distinct from learning-something-or-other at some level from novice to virtuoso.[9] Moreover, our observations suggest that practising always includes responding to varying conditions that apply at any particular moment at any particular place, and that the cumulative effect of this variation is to contribute to adaptation of the practice to a range of different conditions. Seen from the perspective of someone who has accomplished the adaptation, adaptation looks like learning—having reached a new stage of accomplishment in the practice.

If this is so, then it seems to us that learning and practising amount to much the same thing: that what one learns is always a practice, and that what counts as 'learning' a practice is always part of or a stage in practising the practice, especially when one is new to the practice or when one is practising in new circumstances. On this view, one is always simply at an earlier or later stage of efficacy and virtuosity in the conduct of the practice, always at a more superficial or profound level of being stirred in to the practice.

One thing that encourages us to take this view is that in ordinary life—not in the specialised settings and specialised discourses used by educational psychologists and teachers, for example—people do not ordinarily need an elaborate specialist language to describe learning, or to orient them in their learning or to support them as they learn things. They may say things like 'pay attention to this' or 'notice

[9]One is tempted to use a sequence like the five-stage sequence 'novice', 'advanced beginner', 'competent', 'proficient' and 'expert' employed by Dreyfus and Dreyfus (1986) to describe the progress towards 'virtuosity'. But the apparent logic of this sequence only holds when the sequence is viewed from the perspective of the 'expert', who is expert in this or that particular way, in this or that particular practice. It is not always clear from the perspective of the 'novice' what virtuosity will develop from practising a practice. One learner develops virtuosity in *pretending to read*, for example, while another develops virtuosity in *reading*; and one learner develops virtuosity in physics from practising mathematics, while another's practising of mathematics develops his virtuosity in playing poker.

that…', but they do not need an elaborate language to describe the process. They assume that learners will be able to pick things up with a little guidance and some practice. This suggests to us that, ordinarily, people do not treat the process of learning as separate from the process of entering and engaging in the practice to be learned: ordinarily, people come to know how to go on in the language game so they can use (practise) the language of the topic of an exercise in a textbook, or conversational French, for example. It seems to us that if a specialist language were needed to describe learning as a distinct process or practice, everyone would be using it all the time, since we are learning more or less constantly in the everyday world. But we do not have an elaborate everyday language of learning. This seems to us to be a kind of proof that ordinary people do not need an elaborate specialist language or discourse for describing learning in the ordinary learning situations they meet from day to day. A compelling example is the everyday, yet extraordinary, process of children learning to speak a language, in which children begin to use words and approximations of them at the prompting of parents, siblings and others, usually without anyone formally designated as a teacher in sight; in such situations, children are 'just' stirred in to the practice of using the language. Perhaps people know intuitively that learning is like that: that it is not a specialised and particular practice distinct from other practices. Perhaps people know intuitively that, rather, 'learning' is the word we use to describe the particular state a learner is in when they are in the process of coming to know how to go on in practising a practice, when they have not yet reached the level of virtuosity in the practice that they or someone else wants them to reach. Or perhaps it is a word to use when we know that a person is in a particular setting—like a school classroom, or a workplace learning setting—where people gather expressly in order to 'learn' to do things.

Nevertheless, we have little doubt that we will all continue to use notions like 'learning' and 'knowledge' and 'concepts' and 'values', as if they were separable from coming to know how to go on in activities, language games and practices. But our observations lead us to think that these notions are comprehensible only in terms of the practices that ground them. It seems to be the case that what we call 'learning', like what we call 'knowledge', 'concepts' and 'values', always arises from, recalls, anticipates and returns to its use *in practices*.

Learning and the Reproduction and Variation of Practices

Simply by virtue of *being practised* (of coming into being in people's practising), social practices *reproduce* themselves. By being practised, they create conditions of human social possibility that can be repeated. By being practised under different conditions, in differing times and places, however, practices are not just repeated as a kind of mimicry; they are always repeated or (re-) produced with adaptive *variations*, like improvisation in jazz or dance. Variation occurs both in response to pressures of circumstance and as participants explore opportunities for refinement

or extension of practices. By varying the way particular practices are practised in response to changed historical or material conditions in different times and places, practitioners create conditions for the *transformation* and *evolution*[10] of both the practices and themselves as practitioners, whether for better or for worse. The history of this evolution is the evolution of a *practice tradition*, always varying in relation to local conditions and the historical moments in which they are embedded. From the perspective of the practitioner practising the practice, however, the history of this evolution in its successive enactments is also the history of the practitioner's 'learning', which is to say their *self-formation* and transformation.

This is another reason for thinking that learning is no more than (a stage in) practising: practising always varies, however slightly, to adapt to new circumstances. In the light of all we have said earlier in this chapter, our observations lead us to conclude that what people ordinarily describe as 'learning' is no more than this kind of adaptation. While it is usual to say that a learner learns by adapting to new circumstances, we might equally say that a practitioner develops a practice, and her or his practising of the practice, by adaptation of existing modes of practising. And this, we think, is true of students practising a new language game in a classroom like the language game of 'climate change', or teachers practising a new approach to teaching like 'the inquiry approach'. We all learn new practices by variation: by adapting existing practices to new situations and settings, sometimes to the point where we conclude that past practices have been 'transformed'. 'Learning', on this view, is the variation, adaptation and transformation of practices.

Conclusion

Some readers may baulk at our view that learning is nothing more than a process of being 'stirred into' particular ways of living, particular practices, and that this process is inherently social, not just psychological. Our view challenges some taken-for-granted conceptions of learning and understanding. Other challenges we invite the reader to take up include the notion that knowledge is an after-image or after-effect of becoming a practitioner of one kind or another. And perhaps most controversially, we ask the reader to consider whether 'learning' 'exists' (at least as commonly understood).

Hesitations about these propositions are understandable given the immeasurable extent to which we have all previously been 'stirred into' a particular set of practices in which we are always and everywhere implicated. In this case, what has dominated our thinking is a view of the practices of a society that overtly and

[10]The idea of the evolution of practices relates closely to the notion of the evolution of knowledge described by Stephen Toulmin in his (1972) *Human Understanding, Volume I: The collective use and evolution of concepts*. In an epigram at the beginning of the book, he quotes the philosopher Søren Kierkegaard (from Kierkegaard's *The Concept of Irony*): 'Concepts, like individuals, have their histories, and are just as incapable of withstanding the ravages of time as are individuals'.

covertly frames learning and understanding primarily as a psychological process, undertaken by individual learners, even if they often do so in various sorts of social settings like schools, workplaces, clubs, leisure venues and so on. Such scepticism may also have roots in the increased individualism of contemporary culture, together with the technocratic rationality evident in contemporary neoliberal times that appear, for example, in the form of various audit technologies used to keep under surveillance the individual and collective work and lives of students and teachers.

Against that neoliberal view, we offer a 'societist' (Schatzki 2003) alternative: to see learning from the perspective of practice. In the introduction to this chapter, we posed a challenge to some ways of viewing learning and knowledge that are generally taken for granted when we discuss what goes on in classrooms, schools, universities, in workplaces or in other places where we normally say that people 'learn' things. We argue that it might be possible to talk about the development of practices—what people ordinarily call 'learning a practice'—without using the discourse of 'learning' at all, and perhaps without other familiar terms like 'knowledge' and 'concepts'. For us, the challenge is to show how such an heretical and apparently unthinkable notion might be made orthodox and thinkable—or at least to show that it is possible to look at 'learning' and 'knowledge' in a different way, and to see them from the perspective of the practices in which, we believe, both are co-located and constructed.

With this view of practices as a guide, we conclude that people learn only language games, activities, and practices, and the things they are said to learn—notions like 'knowledge', 'concepts', 'values' and 'skills', for example—are the after-images or after-effects of their having found how to go on in practices. 'Knowledge', 'concepts', 'values', and 'skills', we argued, arise from, recall, anticipate and return to their use in practices. We also came to the view that learning is not a distinctive process but rather the name for a state someone is in when they are in the process of coming to know how to go on in practising a particular practice. These conclusions provoke us to look rather differently at a large range of situations we observe as educators and educational researchers. They provoke us to ask what practices people are engaged in when we encounter them in different kinds of situations, especially ones where 'learning' is said to be occurring. We now ask what it is that people are being invited to—or are inviting others to—'go on' in.

Throughout this chapter, we have sought to question the 'common sense' usage of the terms 'learning', 'knowledge', 'concepts', 'values' and 'skills' in ways that may variously challenge, provoke or engage readers. We have aimed to stir readers in to a series of language games about these venerable terms in order to understand learning from a practice perspective—to see learning as practising learning practices and practising substantive practices to be learned.

On this view of learning as being stirred in to practices, we can ask what kinds of sayings, doings and relatings we want learners to come to know how to go on in, within what projects of the practices we want them to learn. And we can ask what kinds of practice architectures are needed to support the practices we want them to learn, both the practice architectures of learning practices we may want learners to

enter, and the substantive practices we want them to learn. Moreover, to learn these practices, we may want to think carefully about *learning design*, in terms of the practice architectures we want learners to encounter, in the form of arrangements that will enable and constrain their practice in the intersubjective space in which they and others encounter one another in the world. On this view, we may begin to think about curricula as curricula of practices, composed in practice architectures that will enable and constrain learners as they enter the practices to be learned. Furthermore, it opens up possibilities to think about how learners can learn by processes of variation that foster the formation and transformation of their practices, and thus their self-formation and transformation as persons (and not only in terms of their 'store' of knowledge, concepts, values and skills).

In the 'ordinary' classrooms we observed, we encountered educators who see their central role and purpose as extending, challenging and enriching learners both socially and academically, that is, in terms of the students' formation and coming into being as future citizens of our world. We have attempted to examine the kinds of conditions and practices that occur in the moment-to-moment transactions of classroom engagement that offer paths towards achieving this critical moral purpose of education. What we have come to see, however, is that the formation of these students as persons and as future citizens occurs through *the formation of practices*: the formation of students' and teachers' and leaders' capacities to go on in particular kinds of practices, to be the bearers of these practices, and to participate actively in formation and transformation of the practices themselves—as paths and as ways of being for those who practise them. In the seeming 'ordinariness' of the day-to-day, reciprocal, classroom practices of 'learning' and 'teaching' we thus catch glimpses of something extraordinary in the making: the formation of people capable of individual and collective self-expression, self-development and self-determination, who have it within their power bring into being a culture based on reason, a productive and sustainable economy and environment, and a just and democratic society.

Acknowledgments The authors gratefully acknowledge the support of the Australian Research Council for the 2010–2012 Discovery Project (DP1096275) 'Leading and Learning: Developing ecologies of educational practice'.

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