Research in Networked Learning

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Research, Boundaries, and Policy in Networked Learning

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Research in Networked Learning

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Dedicated to the memory of Sheena Banks, a significant figure in the establishment of the Networked Learning Conference in 1998, and in its development since, and whose contribution to the field will be missed

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Chapter 1
The Relationships Between Policy, Boundaries and Research in Networked Learning

Thomas Ryberg and Christine Sinclair

The biennial Networked Learning Conference is an established locus for work on practice, research and epistemology in the field of networked learning. That work continues between the conferences through the researchers' own networks, 'hot seat' debates, and through publications, especially the books that include a selection of reworked and peer-reviewed papers from the conference. The 2014 Networked Learning Conference which was held in Edinburgh was characterised by animated dialogue on emergent influences affecting networked teaching and learning building on work established in earlier conferences, such as the inclusion of sociomaterial perspectives and recognition of informal networked learning. The chapters here each bring a particular perspective to the themes of Policy, Boundaries and Research in Networked Learning which we have chosen as the focus of the book. The selection of the papers has been a combined editorial and collaborative process based on our own initial review of the conference papers and notes from the conference, as well as an informal survey where we asked conference participants to recommend three papers they found particularly interesting. The papers for the Networked Learning Conference are all peer-reviewed, and as they have turned into chapters for this book, each has been re-reviewed by the editors and

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other authors. The result is a genuinely collegial distillation of themes from a stimulating conference; a snapshot of a time when national and international policies and boundaries have been changing.

Policy issues seemed more dominant in this conference than in previous ones though they had always been present, along with questions of power and agency. Indeed, the current emphasis on policy and politics was anticipated in the previous conference held in Maastricht 2012. As Hodgson, De Laat, McConnell, and Ryberg (2014a) wrote in the introduction to the book resulting from that event:

> implementing pedagogical changes and institutional learning environments is always a political process first and only secondly pedagogical (Hodgson et al., 2014a: 7).

Our authors are alerting us to some of the less visible effects of policy and also to the impacts on boundaries. In turn, what happens at the boundaries of practice will inevitably feed back into policy. Again, boundary work has always been prevalent in networked learning discussions: it seems, however, that the time has come to re-cognise the implications and scrutinise what may be obscured through complexity and busy-ness. And while exchange of research is what networked learning conferences are all about, this time there is a sense that it is appropriate to pay attention to how the nature of research is itself changing and needs to change to respond critically to an increasingly neoliberal agenda in educational institutions.

As the contexts change, so do opportunities and methodologies for research and networked learning. We return to discuss this further in our concluding remarks after our discussion of the three central themes that each have their own section: Policy, Boundaries and Research in Networked Learning.

Part 1: Policy in Networked Learning

This part consists of three chapters that all concern different aspects of policy and politics within networked learning. As Jones argues this is an area that has been addressed previously, though not extensively, within networked learning. He notes that while policy is not always explicitly highlighted in definitions of networked learning (such as McConnell, Hodgson, and Dirckinck-Holmfeld (2012)) notions of critical pedagogy and ethical considerations have always been central. However, what stands out as a strong message from the three chapters here is that policy and politics deserve more attention and recognition within the field. We will briefly summarise the three chapters by Sarah Hayes, Ben Williamson and Chris Jones and then draw out some wider themes we think part: are particularly interesting across the contributions.

Sarah Hayes takes a transdisciplinary look at ‘rational’ (or common sense) policy discourse about use of technology. She examines a corpus of UK policy texts through the lenses of critical discourse analysis and critical social theory. The chapter demonstrates how policy statements frequently remove or obscure human agency from the notion of ‘the (effective) use of technology’, privileging a narrative

of economic gain over higher education labour. Hayes calls for academics to restore the visibility of human labour by writing specifically about how they themselves work with technology.

Williamson's chapter is perhaps the place where the three broad themes of the title of this book are most strongly linked, through a process of policy network analysis bringing together the notion of the boundary broker organisation and the theoretical construct of the sociotechnical imaginary. Boundary brokers work as intermediaries across public, private and third sector organisations and individuals—helping to create a decentralised politics based on networks. Sociotechnical imaginaries are shared visions of future life made possible through technology. Williamson illustrates through contemporary examples how boundary brokers are using sociotechnical imaginaries to envision the governance of education systems through data analytics and database pedagogies, and the concomitant governing of individuals to participate in personalised lifelong learning. These networked technologies can accelerate changes in spatial and temporal aspects of educational governance and signal a move away from more bureaucratic forms of government.

Chris Jones calls for researchers in networked learning to engage with the broader political landscape. The issues at stake can be illustrated through the rise of Massive Open Online Courses (MOOCs) where, Jones argues, utopian aims have been superseded by more neoliberal ones as austerity policies began to affect higher education. Jones draws attention to rhetorical moves—especially the technological determinism argument—that create an impetus for forms of education that are regarded as necessarily dominated by a neoliberal perspective. This necessity is an illusion fostered through newer forms of long-standing positions that ignore or drown out alternative arguments and values in higher education. Jones demonstrates that we need to be alert to moves towards neoliberal and technological determinism in order to mount a resistance.

Discussion

The chapters all concern how political actors and policy networks conjure or mobilise 'sociotechnical imaginaries' to use the term Williamson introduces in his chapter (referring to Jasanoff (2015)). A socio-technical imaginary is a shared vision of a future life made possible through particular technologies or as Williamson puts it:

> a collectively held, institutionally stabilized, and publicly performed vision of a desirable future […] Sociotechnical imaginaries are the result of relations between technology and society, are also temporally situated and culturally particular, and simultaneously descriptive of attainable futures and prescriptive of the kinds of futures that ought to be attained. (Chap. 3).

Although not all three chapters employ the particular term they all in our view concern different socio-technical imaginaries. Ben Williamson discusses data-base pedagogies and learning analytics as contemporary imaginaries; Sarah Hayes

scrutinises UK policy text to analyse how 'technology', 'technology enhanced learning', or 'effective use of technology' are used as broad labels of assumed good in future classroom practices; Chris Jones tackles the concept of MOOCs and looks critically at how such an imaginary (or perhaps a constellation of imaginaries) has shifted its form over the years at it has been co-opted from a pedagogical network to being adopted and circulated in commercial and administrative-managerial networks instead. Common to the social imaginaries are that they linger between an accomplishable now and a close-enough future. They live somewhere between present reality and a dawning brave new world.

The examples drawn out in the chapters are already-existing technologies, services or ideas, but they draw their persuasiveness not out of their current status but out of their imagined potential, in the things to come. As the authors point out, education has always been on the brink of major breakthroughs: all the way back to Sidney Pressey's early 'teaching machine' developed in the 1920s that Williamson is referring to, and to the recently predicted disruptive avalanche of the MOOC Jones refers to. Most researchers within educational technology, and networked learning in particular, probably recognise there is a recurrent narrative of imminent and/or necessary change with the advent of 'new' technologies. In general new technologies are often imagined to bring about immense changes to society in the near future (Jones, 2015). While many researchers and practitioners are probably somewhat resistant and sceptical about many of the claims made by pundits and techno-optimists it could be, as suggested by Selwyn (2014), that the educational technology community has a blind spot for the politics of educational technology. As said, policy, and more widely critical theory and ethics, have been ongoing issues of debate within networked learning. In fact the early 'networked learning manifesto' (Beaty, Hodgson, Mann, & McConnell, 2002) was specifically written to inform policy and to realise an alternative future for educational technology. A future emphasising diversity, inclusion, democratic dialogue and learners' participation in knowledge creation over transmission of knowledge. While these blind spots might be less pronounced within the area of networked learning the chapters certainly provoke us to collectively revisit our thinking of the politics of educational technology.

What the chapters in our view help us see is the extent to which these narratives are not exclusively put in circulation from within the educational technology community, but how they are formed by wider policy networks and how cross-sectoral organizational networks spanning public, private and third sector actors increasingly are driving learning agendas. This is the specific object of Williamson's inquiry where he explores the role of cross-sector boundary brokers in the education political landscape and trace how policy making and governance is performed in mobile networks rather than exclusively in the traditional, hierarchical bureaucracies of the ministries. However, this is equally visible in Jones' critical discussion of MOOCs, where he cites a report from the think tank "Institute for Public Policy Research" written by authors employed by Pearson (which is an example of such a cross-sectoral policy network). Here Jones traces how an original intention of opening up education, born and bred within a public university and envisioned to act with the free, public, university as the backbone was co-opted and superseded by a

network of private universities and spin-off companies who transformed also the very pedagogical idea of the MOOC; from a view emphasising learning as connections towards a more traditional instructionalist model copying what several open universities had done for decades, but managing to rebrand it as both a pedagogical and educational 'disruptive innovation'.

This is what is often referred to as the difference between cMOOCs and xMOOCs, although, as Jones points out, this distinction is too crude and overlooks that also the Edx and Coursera MOOCs come in great variety and certainly also with pedagogical innovation (see also Conole (2013)). What overshadows this, however, and should provoke reflection within academia is the speed, veracity and reach with which sociotechnical imaginaries associated with the MOOC have spread within both the administrative-managerial networks within Higher Education, as well as the general public. While it has been propelled from within the academic edtech circuit, there are certainly also other forces in play, and as all the authors suggest there is a strong pressure from several sides to open up education—not to the public—but to more actors such as multinational companies.

This provokes us to reflect on our practices within academia. Do we, as a community, too uncritically embrace technologies or designs without proper reflection? Do we perhaps too uncritically follow the funding streams, shrug our shoulders at hyped concepts and believe we can do as we have always done—just appropriating new words for the same? In case of the latter, do we need to think about whether we just appropriate a new vocabulary, or whether concepts as MOOCs, Web 2.0, 21st century skills, and social media appropriate us and enroll us in particular sociotechnical imaginaries that we have little control over? Should we snowboard down on top of the avalanche or should we be working on caving in the snow? Should we as a research community contribute to applications and reproduce the linguistic constructs of 'effective uses of technology' and nominalisations that Hayes unfolds and critique in her chapter? Do we need, as Jones suggests, to pay greater attention to formal or 'high' politics within Networked Learning? To help us answer these questions the most recent books in the Networked Learning Research series by Jandric and Boras (2015) and Jones (2015) are welcome contributions and can hopefully assist in leveraging the awareness of policy and politics in Networked Learning.

Another theme emerging from the three chapters on policy in networked learning is the gradual disappearance of humans in technology enhanced learning—and not in a critical, considered way to do with actor-network theory or critical posthumanist approaches. Rather, humans seem to disappear or become backgrounded in different ways in the three chapters. In Hayes' chapter she eloquently shows how this erasure is accomplished through linguistic nominalisation where it becomes hazy as to who the acting subjects are. In contrast, constructs such as 'the strategy will aim to' gloss over the actual human work that needs to be done to realise such strategies. As Hayes puts it: "The discourse promises much but is in fact deceptively spacious, because both staff and students are missing from it." While such nominalisations perhaps often occur within legalese, Hayes suggests that these acts of rendering human work invisible are particularly problematic within areas where there are already hidden workloads acting as silent barriers to the implementation of technology in higher

education. Hayes highlights a particular citation in her chapter: "The use of technology to create digital archives to improve documentation of practice and to support curricular developments as well as more effective use of technology" (Chap. 2). As Hayes comments herself this seems to generate a curious circular outcome where 'the use of technology' becomes a means to ensure 'more effective uses of technology'. This might, however, not be so far-fetched if we direct our attention to the database pedagogies discussed by Williamson. In fact this seems to be the very rationale of algorithmic governance e.g. that traces and activities of humans are aggregated, ordered and analysed by machines and then used to improve the algorithms and machines which can then provide a better service or perhaps help humans to understand better their own learning or skill development. For example this is imagined in the following way by Beluga Learning (as cited in Williamsons chapter):

> The data is allowing the software to make a real-time prediction about the learner and changes the environment, … the pedagogy and the social experience. … This process occurs continually and in realtime, so that with every new piece of data collected on the student, their profile changes and the analytical software re-searches the population to compare once more. … The content and environment then adapt continually to meet the needs of the learner. (Beluga Learning 5–6) (Chap. 3)

Thus the software is imagined as making (better?) sense of the learner's learning and surroundings to foresee and adapt in real-time to the learner's needs. Much is said about the role of the algorithms, less is said about the learner's or human agency. More importantly, however, what is also rendered invisible is the human labour lying behind the algorithms. Similarly to the erasure of human agency in the policy texts it seems that 'data', 'software', 'algorithms' act almost autonomously (and inherently rational) rather than being designed by particular people (or companies) with particular professional skills, worldviews, pedagogical understandings, and commercial or political agendas. Rather than foregrounding political or commercial actors this erasure surgically removes intent and agendas and place accountability with assumed (rational) machines who seem to autonomously learn through mere (objective) observation and collection of human behaviour.

In the final chapter by Jones, human erasure is seen in a more indirect way. Namely in the sense that some versions or imaginaries of MOOCs are viewed as a solution to what Wiley (2003) termed the 'bottleneck' problem i.e. that 'the teacher' is a bottleneck which some educational technologists view as replaceable with reusable educational resources and intelligent tutoring systems. Obviously, a model of massive courses with few teachers and with automatic or peer-graded assessments seems a new way of solving the bottleneck problem and delivering education to a massive audience.

While in many ways the idea of replacing teachers with technology seems a way of eradicating human agency in learning, we should not forget that some saw (and see) this as a move to empower other people—namely the disadvantaged learner or the learners who cannot attend an 'ordinary' education (Jones, 2015). Access for the disadvantaged learner and to those with no access to educational provision has been a prominent discourse within the MOOC circuit; although the reality of these ideals has been questioned (Jones, 2015).

What perhaps comes out of these chapters is the need for an increased focus on disentangling discourses and varying perspectives. As mentioned Selwyn (2014) argues that the edtech community seems inattentive to the politics of educational technology. Further, he illustrates how—in principle—irreconcilable perspectives such as anti-institutionalism and neo-liberalism, live happily together around imaginaries such as those associated with MOOCs, the notion of 'open', or social media. While they might have vastly different pedagogical ideals and seek different outcomes they perhaps too easily meet and hold hands to sing edtech's praise. Obviously, as Jones notes, MOOCs can be pedagogically innovative as can learning analytics. What we perhaps need is a heightened, critical sensibility that seeks to render visible possible different agendas enmeshed in these terms; and which agendas we as researchers wish to pursue to avoid uncritically promoting ideas and agendas we are in fact wary of.

Part 2: Boundaries in Networked Learning

As we saw in Part 1, Williamson's boundary brokers are operating in a way that suggests that learners have choice and autonomy while at the same time positioning them as subjects managed by unseen forces. Those learners have their own boundary work to do and how they make sense of them will also be affected by how they are positioned and where they can seize opportunities to make choices. The three chapters in our part specifically devoted to boundaries share a common focus on the meaning-making activities in which learners are engaged and the tasks they are expected to do, which may seem less meaningful unless carefully designed and supported. As Goodyear, Carvalho and Dohn point out, tasks and actual activities need to be distinguished, with activity being emergent rather than designed. Activity might be influenced by boundaries that are social or material—or, more likely, both. Boundaries can impose limits on where and how the activities can take place or demand that the learners find ways of transitioning across physical or virtual spaces. Again, we summarise the chapters before drawing out their wider themes and implications for the complex relationships among learners, learning networks and activities.

Gourlay and Oliver pick up on some of the tendencies to decontextualize and obscure specific educational practices identified in our first set of chapters. In their critique of models framing the popular notion of 'digital literacies', they argue that, although the models have been derived from empirical research, their loss of specificity risks turning students into 'standardised components' in digital contexts rather than as meaning-makers in situated learning. Combining ideas from New Literacy Studies and a sociomaterial perspective and their own case studies, they show the value of taking context into account in thinking about digital literacies. This means paying attention to the unit of analysis for research in this area, which they suggest could be the 'digital literacy event' rather than the individual learner.

Goodyear, Carvalho and Dohn ask the valuable question 'What can be designed and what cannot?' in networked learning. The authors focus on the architecture of networked learning to identify design features that can be reused, particularly

emphasising the material. They stress that while tasks can be designed, actual activities are not—they are emergent from within the complex assemblage that includes things, tasks and people. Revisiting the notion of affordance from a relational-material perspective, they argue that a focus on the affordances of singular things will be inadequate for a networked learning setting. Affordance, then, in networked-learning terms retains its practical significance but marries that with an acknowledgement of the complexity of actual use and practice where 'meaning' is important for the situation, human and non-human entities.

The theme of the chapter by Timmis and Williams is how students make meaning when they have to work across boundaries, for instance between work and the classroom. Timmis and Williams use Bakhtin's notion of the chronotope (the interdependence of time and space), framing student experience through 'chronotopic movements' across different forms of practice. Clinical placements and university classrooms operate under different space-time configurations, and networked learning environments can be used to create a hybrid space to allow students continuity in both. New configurations of time and space both emerge from and may be supported by forms of networked learning; but networked learning itself adds to the complexity of the chronotopes and sometimes the result is discontinuity and disruption.

Discussion

So what are the boundaries implied by our heading for this part. In all cases the authors see boundaries as necessary but permeable, expandable or crossable, and in need of recognition and response. The emphasis is different in each, but there are many crossovers. Our sequence of chapters highlights:

- boundaries imposed by context, which may go unrecognized
- boundaries within the architecture of learning networks that allow practicable framing of design for activity
- shifting boundaries of space and time which open up newer forms of practice

Gourlay and Oliver show that boundaries formed by contexts are important to overcome the notion of the 'free-floating' idealized agent learner. The tendency for researchers to create taxonomies of technologies or of student skills leads to decontextualised accounts of digital literacies—and ultimately lets in the unseen neoliberal forces anticipated in the previous part of this book. 'Free-floating' is an expression also confronted by Goodyear, Carvalho and Dohn: activity is no more free-floating than the learner, but emerges as a response to tasks and is shaped by context. That context is in turn shaped and expanded, providing a challenge for designers seeking reusable ideas for settings for activity. Timmis and Williams provide examples of the kinds of contexts that students on professional programmes find themselves in: a mix of the classroom and the work-based placement, each with its own shaping aspects. Their analysis shows that the impact on activity not only includes the social and the material but also space:time configurations, with

networks providing opportunities but also entailing constraints. All the authors of these three chapters are optimistic though—working around boundaries offers opportunities for developments in networked learning.

The papers in this trio therefore draw our attention to the dangers of focusing on technological considerations or attributes of learners without reference to wider social and material contexts and the effects of networks. Their concerns about what happens at the boundaries provide further support for Sarah Hayes' case made in Part 1 for drawing attention to invisible human labour. By adopting pedagogical models that position learners and/or their activity as 'free floating', researchers or policymakers are likely to lose sight of what actually happens in practice, the duration of required tasks for students and their teachers, and how that work intersects with what happens in overlapping practices such as those identified by Timmis and Williams. Failure to take these aspects of networked learning into account results in a need for learners to improvise or find workarounds as they find themselves unable to do the tasks as they have been set, but still engage in the activities that they see as essential.

Interestingly, to illustrate such improvisations, each of the three chapters uses an example that focuses on the ability to print materials. The need arises at a point when learners want to apply or display their learning, and include: overcoming a barrier to accessing a printer, using print to overcome lack of access to the Internet, using a bike to overcome failure of email to send material to a print shop. Whether the workarounds have to be instigated by the learner or the design team, they are all evidence of attempts to cross unanticipated boundaries and are all examples of problems with access. Thus these examples indicate not only the need for newer technology-based practices to intersect with those from a pre-digital era, but also the discrepancy between intended and actual practice. This was also a feature highlighted in papers from the 2012 Networked Learning conference by Hodgson et al. (2014b).

The discrepancy between intended and actual practice is exacerbated when attention is drawn away from meaning-making and meaningful activity. If learners find their tasks (with or without the use of technology) to be without meaning, the future seems bleak. Gourlay and Oliver lament the loss of emphasis on learner understanding from current ways of talking about digital literacies. They feel this can be restored through a combined recognition of situated meaning-making, as offered by new literacy studies, and a sociomaterial perspective that allows theorisation about the connected nature of learners, texts and devices. Also welcoming the sociomaterial, Goodyear, Carvalho and Dohn emphasise the meaning of situations—and point to the role of significance both for humans and things. This clears the way for reprieving the notion of 'affordance' but now used in a relational-materialist discourse that connects activity and tasks as well as tools, software and other artefacts. Support for meaning-making is arguably most needed at boundaries themselves: Timmis and Williams offer Bakhtin's concept of the chronotope to help learners to make meaning of their transitions between workplace and educational boundaries. Learners (and teachers) do not notice the extent to which we conventionalise and operationalise our space:time configurations until they are disrupted through crossing a boundary into a different type of practice.

While the three chapters share perspectives on the value of the sociomaterial, the need for improvisation and the importance of meaning-making, they may suggest different stances on, for example, the value of taxonomies in networked learning, or the role of space and/or time in the conceptualisation of complex assemblages. Gourlay and Oliver seek to reject essentialising taxonomies of the digital or the human, while Goodyear, Carvalho and Dohn ask: 'What can be designed, and what cannot? Are these designable things all of one kind, or is a taxonomy needed?' The latter do suggest the potential of taxonomies or at least patterns of design that bring together the digital and the human. There are echoes of the chronotopic movements identified by Timmis and Williams in the question Gourlay and Oliver asked students about 'associations between spaces, tasks and times' but it's probably fair to say that time and space for the first two chapters in this part are more associated with emergence than with transition.

The differences in emphasis and potential contradictions across these papers relate to some extent to different theoretical influences and where the authors perceive barriers associated with boundaries to arise. What they have in common is stronger, and has some practical implications for people involved in networked learning who want to ensure their learners are engaged in meaningful work.

Part 2 draws our attention to the need to take account of everything relevant in our networked learning environment and not to allow a limited perspective or ideology to determine what we can say about teaching and learning. While boundaries can be helpful for sense-making, they are constantly changing especially as people have to make creative or improvised decisions to ensure that activity remains meaningful. In an environment where other people's practices—along with technologies, artefacts, tasks and intended learning outcomes—change in response to shifting dynamics, we need ways to theorise the boundary work so that we can see how politics and policy can limit or expand our work in networked learning. Because the theorising and pedagogies are themselves subject to hidden or unanticipated forces around and across boundaries, they are also likely to need to change, a topic which is considered in our final part.

Part 3: Research in Networked Learning

This part encompasses three papers that address in various ways research in networked learning and reflections on how to do networked learning research. Further they again touch upon policy and boundaries though to a lesser extent than the previous chapters. The common core of the three chapters is a concern with research in networked learning, albeit at different levels of scale.

In their model of mobile and field learning, Gallagher and Ihanainen emphasise the need for a pedagogy that takes account of time, space and social presence and their simultaneous relationships. The ephemeral nature of learning in open environments does not deter them from attempting to do this, though it does point to the need for reflective practice. The multifaceted 'pedagogy of simultaneity' model the

authors present provides a framework for considering continuums of pedagogical field activities. However, it also presents a way in which researchers can collect data together with colleagues or students. They conclude that meaning emerges from the establishment of trust especially at the point where students select their focus in the field, discussion and sharing of knowledge, and the construction of collages resulting from formal and informal learning practices.

Along with the other authors in this volume, Dohn stresses the importance of context, as might be expected from her practice-grounded approach. She highlights the notion of 'primary contexts' that 'anchor' our understanding and are important to who we are. She employs two metaphors to explore context: the container (from an individualist-cognitive perspective) and the rope (from a sociocultural one). The learning context as container is pre-established and bounded; the rope is formed of discontinuous elements but presents as a unity. Dohn uses these concepts to critique current uses of motivation and engagement in networked learning and to offer some new questions.

How we research networked learning is itself opened to scrutiny in Jandric's chapter. Petar Jandric's exploration of the dialectical relationship of academic disciplines and research methodologies surfaces the problems that this relationship causes for networked learning. The nature of networked learning leads to the use of postdisciplinary methods; yet, Jandric argues, these are still 'haunted' by disciplinary perspectives. Jandric considers the emancipatory potential of various forms of postdisciplinarity: multidisciplinarity, interdisciplinarity, transdisciplinarity and anti-disciplinarity to seek the best options for critical emancipatory research, favouring the final two.

Discussion

The first two chapters are in different ways concerned with studying and understanding contexts, and more so learners' engagement with context. In Gallagher and Ihanainen they explore the mutability and complexity of context when engaging with 'mobile' pedagogical field activities—an idea that also relates well to Timmis and Williams' reflections on chronotopic movements across different forms of practice. Whilst field activities are well-known pedagogical practices, the inclusion of mobiles and mobility adds new layers to the data collection process including both multimodal data (audio, video), but equally geo-spatial data, as well as classic field notes, maps etc. However, what is more important is how learners may engage with the messy, cacaphonic field of opportunities they are presented with when entering real-life contexts outside the classroom. Here Gallagher and Ihanainen present three variables, or perhaps continuums, as part of their pedagogy of simultaneity. The continuums represent tensions between serendipity vs intentionality, informal vs formal, initiative vs seduction and all concern the ways in which the students engage with the context at hand; are they seduced by its offers and serendipitously experience in a very informal way what it has to offer; or are they intentionally taking