Identity-trajectories

Doctoral journeys from past to present to future

Lynn McAlpine

University of Oxford, UK and McGill University, Canada

Despite much research into doctoral education over the past two decades, theorising the field remains challenging. Recently, identity has been taken up as a conceptualising frame. Views of identity vary but often privilege the reproductive features of society, downplaying how individuals can be intentional in pursuing their desires – with the doctorate but one feature of a broader life. Further, many focus on the experience of the doctorate only rather than the doctorate as situated within earlier experiences and intentions and future imagined careers. This paper draws on evidence from a five-year research programme into doctoral experience to argue for a view of identity, identity-trajectory, that attends particularly to individual agency, interweaving the academic within the personal, and incorporating students' pasts and imagined futures. By re-focusing attention on the agency, resourcefulness and independence of doctoral students, identity-trajectory contributes pedagogically and conceptually distinct ways of framing doctoral experience.

Context

Despite much research into doctoral education over the past two decades, theorising the field remains challenging. Recently, identity has emerged as a conceptual frame (Green, 2005) though conceptualisations vary, emphasising, for instance, multiply identities (Barnacle & Mewburn, 2010); embodied, raced and classed identities (Archer, 2008); or identities constructed through community membership (Carlone & Johnson, 2007). These studies largely emphasise experience of the doctorate only, rather than the doctorate as situated within earlier experiences and intentions, future imagined careers, and just one aspect of a fuller life. As well, many tend to emphasise socialisation and acculturation (e.g. Gardner, 2008) or post-modernist (neo-liberal) perspectives (e.g. Archer, 2008) – highlighting the reproductive features of society rather than how individuals can be intentional in pursuing their desires (Archer, 2000). In this paper, I draw on evidence from a five-year research programme to argue the value of a complementary view of identity, identity-trajectory (McAlpine *et al*, 2010), that attends particularly to individual agency, nesting the academic within the personal and incorporat-ing students' pasts as well as imagined futures. Focusing attention on the agency, resourcefulness and independence of the individual at the heart of the doctoral endeavour – the student – contributes alternate ways of framing doctoral experience.

Research programme

Since 2006, two research teams[1], one in Canada and the other in the UK, have researched the experiences of over 80 doctoral students in four universities, initially in the social sciences and more recently in the sciences[2]. Methodologically, the team takes a narrative approach viewing participant information as stories of identity (Sfard & Prusak, 2005). The underlying premise is that narrative can provide a means to make sense of both the constancy of an individual's perception of identity combined with the perception of identity change through time (Elliott, 2005).

For about 60 participants in the social sciences and the sciences, narratives of different kinds have been collected over at least a year: an initial biographic questionnaire, weekly activity logs completed every month or two, fol-

lowed by a pre-interview questionnaire and interview. We recruited another 20 individuals who characterised their stories as particularly troublesome when we noticed that despite difficulties and emotional ups and downs, those participating in the first group reported moving forward. The 20 completed pre-interview questionnaires and interviews only.

As regards the 60, the activity log captures the experiences of a particular week (Agosto & Hughes-Hassell, 2005). The pre-interview questionnaire provides other information related to the total time period, and the information in the logs and pre-interview questionnaire are probed in the interview. Of the 60, a) 20 social sciences students have continued the same data collection cycle in succeeding years so at this point they have been followed for three years (with many now graduated) and b) 10 of the sciences students have just begun their second year of the data collection cycle.

After the first interview, we construct case summaries through successive re-reading of all data for each individual: short texts with minimal interpretation, capturing a comprehensive, but reduced, narrative. Each narrative: a) makes connections between events; b) represents the passage of time; and c) shows the intentions of individuals (Coulter & Smith, 2009). As each cycle of data collection is completed, the summary is extended. The summaries ensure familiarity with each case yet allow us to look across the cases for themes and patterns (Stake, 2006).

The construct of identity-trajectory emerged about two years after the team had begun the research (having completed more than one cycle of data collection) and had been reviewing the cases. Since the notion of identity-trajectory first emerged, subsequent data collection and analyses have refined its characterisation. This paper conceptually integrates the empirically-based interpretations of identity-trajectory that have informed its construction.

Introducing identity-trajectory

The following key constructs underpin identity-trajectory:

- Agency: efforts to be intentional, to plan, to construct a way forward given constraints (whether expected or unexpected) – though not always successfully.
- The personal: the embedding of doctoral and academic experience within broader lives.
- The past: the influence of past experience including relationships on present intentions and imagined futures.
  Two constructs link the personal and the academic:
- Opportunity structures: what is understood or known to be the available career opportunities at any point in time.

- Horizons for action: the options for action seen as personally viable at any particular time.

Doctoral-academic work experience is conceived as three distinct yet interwoven strands that develop somewhat independently:

- Networking: present and past relationships which serve as resources as well as carry responsibilities.
- Intellectual: written and oral contributions to the field leading to recognition.
- Institutional: organisational responsibilities and resources.

These constructs are elaborated below through Sam's story to emphasise that while the discrete constructs offer analytic power, they collectively constitute embodied experiences. While Sam's experiences are particular to him, they evoke the kinds of relationships, emotions and intentions reported by the others. Thus, his story is interspersed with descriptions linking his account to the stories across the 60 cases as well as the study of students with difficult journeys.

Sam's story is told in his own words (with some edits). It draws on the biographic information, the pre-interview questionnaire and interview, and in particular two activity logs as a way to demonstrate their value in capturing a different perspective on experience than in an interview alone. Font is used to differentiate reference to Sam's story from the more general descriptions.

Agency, the personal and the past

Sam, late 20s, is in his 5th year in biology in Canada. In choosing his university programme, he was leaving his partner behind in another city, depending on 'long-distance contact …for the usual moral support.' When he began the degree with a 3-year external fellowship, he imagined a future in academia. Since the end of his fellowship, he has been funded through research and teaching assistantships — and part-time work for his supervisor on a government contract. The past eight months, he has been processing data, doing data analysis and writing his thesis. While he is at the point in his doctorate where he feels he should be with his partner while writing, he has deadlines to meet for his supervisor that make him feel he should remain at the university.

Sam's account demonstrates how past experiences are influencing his present experience of the doctorate, and how the academic is situated within his personal life. He has left his partner elsewhere to do the degree, and is managing multiple forms of paid employment while working on his thesis.

When asked about his work-life balance, despite occasional visits with 'friends for a wine tasting', he responds:

> My work-life balance is relatively low now, as most of my time is spent working. This is largely due to deadlines approach-

ing, and much work left …to achieve them. I feel this may be partly due to … early on in my PhD … not having a clear direction and spending too much time making decisions, rather than making progress towards deadlines. In retrospect, I might have been able to maintain more balance throughout, but motivation was sometimes difficult to maintain. However, these days, I am strongly motivated to finish, and although there is much to do, it is also easier to find something productive to do that is appealing, whether it be writing, data entry, data analysis, or lab work.

Sam is not particularly happy with the present state of affairs, neither personal nor academic. As a result of not making progress earlier on, he is now under pressure. Shifts in his motivation have influenced his work patterns. He is presently more focused and willing at least temporarily to reduce his quality of life in order to finish.

Like Sam, students consistently reported the importance of the personal in their doctoral journeys. Individuals made decisions about where to study and how to invest in their work based on personal relationships – sometimes sacrificing these relationships (like Sam) and sometimes sacrificing their own desires, e.g., choosing a programme which would ensure they could support sick parents or not disrupt children's routines. These responsibilities constrained their time and motivation as regards doctoral work. They also experienced life changing events, e.g., child birth, marriage break-up, illness. Most, on a weekly basis, reported engaging with personal networks: friends for emotional support and family/partner for both emotional and practical support (Jazvac-Martek *et al*, 2011). All had prior experiences, relationships, and intentions which influenced the decisions leading to their present investment in the doctorate as well as their imagined futures. And, like Sam, nearly all consistently reported difficulties in work-life balance. A number reported shifts in their intentions regarding their futures during the doctoral journey (McAlpine & Turner, 2011). While those in the longitudinal study appeared on the whole to navigate these challenges, it was apparent that those characterising themselves as having more difficult journeys were different, often confronting a multitude of upsets concurrently and sometimes in situations where their personal networks were not easily available, e.g., concurrent illness, lack of funding, with geographically distant family and friends (McAlpine *et al*, in press).

The essential point is that students' academic investment and progress need to be situated within personal intentions and lives that can support but also add difficulties to the doctoral journey. The nesting of the academic within the personal, a central characteristic of identity-trajectory, ensures a comprehensive perspective

in making sense of doctoral intentions, motivations, and decision-making.

Opportunity structures and horizons for action

As regards Sam's imagined future, this has changed since he began the degree, given his greater awareness of opportunity structures, the career possibilities he understands to be available:

> Currently, I imagine maybe a post-doc, but frankly, I think [I] will be more likely to …get a job with the government or non-profit, particularly in a location closer to my partner. …post-doc and academic positions are …increasingly competitive, and often require re-locating to different cities or countries, which I am not willing to do for a 1 or 2-year post. I do not believe any university that I would be satisfied with would ever hire me for a tenure-track position immediately after finishing my PhD.

Sam's horizons for action are clear. In negotiating his future he is influenced by personal relationships (his desire to be near his partner) and unwillingness to relocate for the short periods of time required in a post-doc. Still, while Sam is hoping for a job closer to his partner his recognition of the opportunity structures means he will likely end up accepting one in a nearby city rather than the same one.

All students developed a more robust understanding of opportunity structures as they progressed through their degrees, particularly as they neared the end (McAlpine & Turner, 2011). Applying for jobs, described as time-consuming, was reported only in the last 6-12 months of the degree. Since most imagined academic careers when they began, what was evident in their dawning awareness of opportunity structures was the limited number of full-time pre-tenure positions; what was on offer tended to be researcher posts – either funded through fellowships on or someone else's grant. In the sciences, often two post-docs were expected – each of one or two years' duration. In the social sciences, these positions were often extremely short – only six months. Students' horizons for action represented a subset of the opportunity structures – the viable options in light of personal intentions. As with Sam, horizons often changed from beginning the degree to nearing the end, as personal circumstance and perceived opportunity structures changed. Only one of those who completed went directly into a tenure-track position; others took on post-PhD posts to build their profiles and others chose professional posts for security, in one case, negotiating an 'academic' position within a hospital appointment in

order to have the permanence that would enable having a family and still sustain academic potential. Lastly, some students concluded that academic life was not for them, e.g., too intense, too political.

Opportunity structures and horizons for action offer a means to conceptualise the interaction of agency and structure – in particular highlighting a) how individual understanding of structures was continually under revision, and b) how the personal influenced the use of this knowledge.

Networking, intellectual and institutional strands of the academic

I focus now on the representation of doctoral-academic work within identity-trajectory: the interweaving of three developing strands – networking (relationships), intellectual (contributions to the field) and institutional (resources and responsibilities). Two weekly activity logs provided by Sam embody the experience of these strands – the ways in which investment or disruption in the strands influences doctoral work – with the academic remaining nested in the personal.

> One week: I attended a 3-day conference on science policy since I am exploring the possibility of transitioning from a research PhD into a career in policy (given the paucity and highly contested nature of research jobs). So, I viewed this as a worthwhile personal career investment. But, since it wasn't directly related to my research, my supervisor wouldn't support me financially (even though he was an invited speaker at the 'non-relevant' conference). He suggested I use income from my part-time contract work to pay for the conference … For me, this meant using my credit card (hoping to pay off the charge and interest by the end of the semester with a strict personal financial management plan). My supervisor's response also meant not receiving any acknowledgement of the value of this event.

Now that Sam is imagining a non-academic future, he is intentionally seeking to understand the opportunity structures available, despite his supervisor's lack of support, and this investment has negative implications on his financial resources.

Sam continued:
Nor did [my supervisor] introduce me to any colleagues or help me to network. I overcame this …by relying on fellow students and colleagues at the conference who know me and took the time to introduce me to people and expand my network. Connected to the conference was a 1-day workshop on knowledge transfer. Although I doubt I will ever do knowledge transfer as a career, I realised that, whether I am in research or policy, becoming familiar with this field and its language was beneficial, and I also

met senior administrators from several universities that I wouldn't have otherwise.

Sam recognises that networking, getting to know others in his area of interest, is important – not only for his present work but also in expanding his opportunity structures. In this instance, given the lack of supervisory support, Sam drew on his present peer network to help him.

The academic networking strand (not students' personal relationships though these may occasionally overlap) represents contemporary and historical relationships which individuals build up, draw on and contribute to. The other students, like Sam, engaged with local, national and international contemporary networks on a day-to-day basis (Jazvac-Martek *et al*, 2011). They demonstrated resourcefulness in drawing on individual peers, more senior academics, student teams/groups in addition to their supervisors for different kinds of support, e.g. peers for advice, other academics for scholarly and career advice. As with personal relationships, academic networking sometimes carried responsibilities, e.g. future reciprocity. A few students expressed discomfort with building academic networks, describing the activity as too strategic. And a number did not realise until near the end of their degrees the importance of networking to their identity and career development.

> Interestingly, attending the conference definitely made me feel more like an academic than a policy-maker …I began to question my plans to move into a career in policy, and wondered if I would be happier doing pure research. While I'm still not sure, I feel it's important to explore these possible paths before committing to one. Overall, much of what I learned will still be applicable in a pure research career, in terms of 'soft skills' and activities that may not be directly related to research performance, but certainly to social engagement and job fulfilment (at least that is my hope).

The event, in fact, led Sam to rethink policy as a potential career. At the same time, the experience provided valuable knowledge related to his desire for a personally fulfilling job.

> Another day, I prepared a job application for a policy job ….

Applying for jobs was important given that Sam was nearing the end of the degree. He never reported seeking supervisory help in this task, drawing instead on his extended network for advice.

> …and Monday was spent in meetings, working as a Teaching Assistant, and a few hours actually reading material related to my research. I was also in touch with a doctoral student in Europe about my research methods. … I spent 5 hours on data collection and analysis that contributed to actually making progress on my PhD. I see my #1 priority

as getting back to data collection and analysis, so I can then write.

While Sam reports many activities here, I focus on his reference to 'actually reading' – something he appears to perceive as important but spends little time at.

In identity-trajectory, reading is conceived as a feature of the networking strand. Thus, while networking can be intuitively understood as involving inter-personal interaction with contemporary individuals, in identity-trajectory networking is conceived more broadly to include inter-textual networking – engaging in the historical, epistemological, and methodological networks that are constructed through reading as well as conversation (McAlpine, 2011). The work creates a network of key scholars and ideas pertinent to the thinking underlying the thesis, and academic thinking more broadly.

What was striking across the 60 students was that reading was reported as frequently as writing. Generally, there was more day-to-day reference to reading in the sciences than the social sciences; this may have been influenced by the fact that these students were all nearing completion, whereas the social sciences students were at a range of different places in their degrees. Still, reading as an activity was not straightforward: like Sam, often 'squeezed in' among other activities or not possible due to time constraints. In the social sciences, individuals' were reading to find epistemological links that might underpin their work. Such links could be historical or contemporary. In the sciences, rather than epistemological links, reading related to empirical findings in recently published papers representing the most up-to-date experimental results. There was a sense at times particularly in the social sciences that reading was not always done purposively, e.g., being done when experiencing writing block. And students sometimes wanted supervisory help as regards what and how to read yet rarely received it. This contrasted with the sciences where reading was connected to daily research practices in which experiments are run countless times attempting to replicate or extend previous findings. Thus, individuals might set themselves goals as to the number of papers to read each week.

While students were intentional in doing reading, rare was the student able to articulate the nature and role of the process. However, one social sciences student noted that 'when one is writing, one is never alone'. And in the sciences, one recent graduate described how reading (and subsequently writing) linked him to the broader community. The development of academic inter-personal and inter-textual networks precedes and contributes to the development of the intellectual strand – writing and other forms of communicating that contribute to one's specialism.

Returning to Sam's story:

> As part of my regular routine to stay healthy and sane, I ran 2 days, played Ultimate Frisbee 1 evening, and worked out in a gym 3 days. With neither the time nor the money, I don't engage in many other social activities. As on most weekends, I cooked, cleaned, did grocery shopping and laundry - all the things I typically don't have time for after a day in the office or lab. I saw myself as the most significant individual in my progress this week, since I chose to invest time in activities not directly related to my thesis, with the hope they would translate into long-term career benefits.

Sam creates a routine to maintain a work-life balance. Again we see clearly his commitment to situating thesis work within what is for him the present issue of finding a job. Another log looks quite different.

> I spent approximately 40 hours this week on work contributing to my study, most of it processing about 80 samples in a gas chromatograph (GC). Each sample required a minimum of 8 minutes. So …to feel productive, I set up my laptop beside the GC and organised data files and wrote analysis scripts while waiting. …The samples occasionally took a little longer than they needed to because I would get distracted by these other tasks, but it meant the work was less boring and I got a lot more done. I also had a 1-hour weekly meeting with my supervisor to discuss progress and deadlines; we talked in the lab next to the GC, so I could continue to process samples.

We see here that Sam is resourceful in organising himself so that he both uses his time well and stays motivated. His location enables him to develop his institutional strand; this strand carries responsibilities yet provides resources to progress intentions. He has access to a lab and research tools, but he also is charged with working with the lab technician to ensure supplies are adequate as well as teaching. Further, he meets with his supervisor, another form of institutional resource.

University and departmental location, not surprisingly, influenced the development of the institutional strand, organisational responsibilities and resources, as well as the other academic strands of identity-trajectory. I begin by examining the supervisory relationship as a responsibility-resource and then move on to other examples. In entering a PhD programme, individuals assumed a role with responsibilities and began to interact with another individual, the supervisor, also holding an institutional role. In other words, while supervisors are generally conceived as involved in the development of students' intellectual and networking strands, in fact, the supervisor can also be conceived as an institutional and regulated resource. In drawing on this resource, students at various points in the degree generally wanted advice or support from their supervisors less than

half of the weeks surveyed, tending to seek more support near the beginning and end of their degrees (McAlpine & Mckinnon, in press – an analysis focused on 16 students' supervisory wants and needs). While they wanted feedback on particular tasks they also wanted and did not always get feedback on their overall progress. Interestingly, a considerable number of times, the help sought was related to institutional issues – university requirements, form filling, institutional access to resources – as well their networking and intellectual strands. The reasons students gave for seeking help from their supervisors rather than others were consistently one or more of the following: a) the supervisor was more experienced in research, networking and institutional regulations; b) the supervisor had the necessary disciplinary expertise including methodology; and c) the supervisor was the 'most informed about my work'. In this study and the one about those with difficult doctoral journeys, three issues emerged as disruptive of student progress – supervisory unavailability, lack of intellectual investment, and interpersonal conflict. In the case of the students in the latter study, as noted earlier, their academic difficulties were usually combined with personal concurrent challenges.

Overall, while the supervisor could enable institutional connectedness, offer networking opportunities, and encourage intellectual development, when this was not the case most students were agentive in seeking support elsewhere given their extensive networks both academic and personal. Students appeared to understand that the basis for the supervisory relationship was ultimately an institutionally defined role assigned for the duration of the doctorate. They all expected the relationship to be professional, but not all expected or wanted more than that.

Moving now to other aspects of the institutional strand, students generally reported drawing on libraries and librarians, office space and office equipment, lab equipment and technicians, computers and software to progress their work. Additionally, they drew on intellectual resources such as seminars, workshops, and more senior academic colleagues for advice. And, they benefited from university funds, not only university fellowships but also teaching contracts and TA-ships which enabled them to contribute to an aspect of the institution's mission. Such responsibilities were often perceived as opportunities since they afforded students useful experiences of academic work and also led to satisfaction in contributing to institutional decision-making (McAlpine & Amundsen, 2009). Unfortunately, students also reported difficulties in finding pertinent policies and services which they reported disrupted progress; even seeking help in their departments was an ad-hoc affair (McAlpine *et al*, in press).

Lastly, students had chosen a doctoral programme based on their own desires and personal commitments in relation to what they understood to be on offer. This had implications not just in their personal lives but also in the institutional resources and responsibilities available to them – though they were not always fully aware of this until they had begun their doctorate. For some students this meant not finding the intellectual and networking resources they had hoped for in their departmental locations. In such cases, students were often agentive and resourceful in seeking support in other departments within their universities and even going to other universities to join networks or attend seminars (McAlpine & Lucas, 2011).

Developing the institutional strand of academic identity is critical to understanding university governance – essential if students wish academic careers (McAlpine & Asghar, 2010). While many students engaged in activities that helped them learn how academic institutions functioned, others did not report this kind of academic work. Given increasing pressure for 'timely' completion, it may be that some students received advice to avoid such involvement – strategic in the short-term but potentially detrimental in the long-term for students intending academic careers.

Returning now to Sam's story in his second log:

> I spent a lot of time on-line reading about an open-source document-preparation system, learning to use it to write my first thesis chapter / publication, and emailed technical questions about the software to some colleagues in the lab who had already used it. …Exploring this resource was the most important experience this week since it provided the specific information I wanted, helped me solve problems and make progress on my goals …I also wrote the bulk of the methods section for a publication, which is also a chapter in my thesis.

Here, reading supports Sam's use of another institutional resource designed to facilitate his writing, though he also calls on his colleagues for help. As a result, he is able to move forward on his writing goal.

> And, I spent about an hour looking into a conference I want to attend …I will have to complete a couple of travel grant applications over the next couple of weeks. I also spent 4 hours organising committee work and a meeting for a science policy conference …later in the year, a couple of hours organising an EndNote database for a contract job, and attended a statistics workshop. I checked with computer staff about backup options, and also coordinated with technical support staff for installation of software on lab computers for microscope cameras. I felt like an academic the whole time I was in the lab, and especially while learning to use the arcane (but effective!) document preparation system.

Evident here are multiple forms of academic work which collectively constitute academic life, and glimpses of additional institutional resources, e.g, lab staff, available to Sam and other students.

> Beginning the writing process was also important, because it is usually the most difficult, but seeing the product gave me a sense of accomplishment. I was reminded how much I can enjoy writing, and was motivated to continue writing late into some nights, once beyond the initial overwhelming feeling of starting.

While Sam has mentioned writing four times already, this is his first extended reference to what in identity-trajectory is referred to as the intellectual strand – communicating in ways that make a contribution to one's specialism or field.

Not surprisingly, given the focus on completing a doctoral thesis, whether in the social sciences or the sciences, individuals reported writing on a regular basis – with the more common dissertation genre in the social sciences being a monograph and in the sciences a series of papers. Many experienced difficulties in getting started and reported writing blocks as they developed their ideas through writing and then tried to clearly represent their ideas to others (Boggs & McAlpine, 2010). Students also reported tensions around how much time to dedicate to writing given competing demands. Still, a number, like Sam, reported enjoyment and a sense of accomplishment when their writing was flowing. Students were drawing on the 'knowledge-making' practices of their specialism (developed through their inter-textual networking, reading) to develop the intellectual strand (contributing to their scholarly community). They wrote both for themselves (e.g., lab and field notes, code, Endnote summaries), for others (e.g., manuscript reviews, journal manuscripts, departmental annual reports), and occasionally with others (e.g., co-authored papers). Lastly, students generally reported valuing feedback on their writing and seeking it out in a range of venues beyond their supervisors describing feedback as clarifying thinking and enhancing fluency in communicating.

> I also felt like an academic when I was invited to a meeting about statistics workshops with two academics, another graduate student, and a research professional from a government research centre. I am helping to organise such grad workshops in the department. During the meeting I realised I had relevant experience and suggestions to contribute: I didn't feel like a lowly, passive grad student who needed help, but like someone with applicable experience, an academic peer, with a vision for provincial-scale initiatives. This was particularly true when I realised that the professional had only recently finished his PhD, so the quality of the PhD degree seemed somewhat inflated, relative to the quantity of experience that separated the two of us.

Here Sam is working outside the university, in fact, representing it and being recognised as someone with expertise rather than a student.

The other students consistently reported being engaged in the same range of networking, intellectual and institutional activities as Sam. While noting that not all were directly related to completing their degrees, they described the motivating power of both contributing to and being recognised for their involvement in academic work beyond that directly related to doctoral work. Further, they viewed these activities as valuable in better preparing them for a possible academic life (McAlpine & Amundsen, 2009). The networking, intellectual and institutional strands in identity-trajectory contribute a distinct structure by which to analyse the ways in which students developed their identities through engaging in doctoral-academic work.

> I like to set daily goals, keeping a To-Do list to help me remember small things, particularly administrative details. In this way, I can get more small tasks accomplished in between the bigger ones that actually occupy most of my attention. But to meet the goals I sometimes have to stay very late in the lab which interferes with my eating and sleeping schedule. And this makes me feel crummy and cranky – until the weekend, when I start to feel more satisfied with my overall progress. This weekend I had a welcome break skiing, and realised how out-of-shape I was after hours in the lab. I also cooked a lot; the leftovers meant I could spend more time in the lab this coming week.

Sam's resilience and resourcefulness are evident – he intentionally uses his organisational skills to maintain momentum and ensures 'downtime' to sustain motivation.

Sam's story ends where it began with a reference to balancing the academic within the personal. This was a constant in the lives of all students. While usually investing in and finding doctoral work interesting, most struggled to find a way to balance the demands of doctoral-academic work within their broader lives. Rare was the individual who had made the decision to treat academic work as a 9 to 5 proposition – something to be left at the office.

Conceptualising and researching doctoral experience

I argued initially that identity-trajectory offered a complementary perspective to those which emphasise the reproductive features of society. While a structural perspective is necessary to understand the influence of factors beyond our individual perspectives, a focus on individual intention, as in identity-trajectory, highlights the individual's sense of agency in navigating some of these structural fac-

tors. It thus offers a means to re-think how we conceive of and research doctoral experience: giving greater attention to how the academic is embedded in personal intentions[3]; how varied past intentions and responsibilities as well as resources are brought into the academic context; and how negotiating these with what is on offer contributes to doctoral experiences and imagined futures.

Conceiving doctoral experience in this way links personal agency and resourcefulness over time to a frequently noted doctoral characteristic – increasing independence (e.g., Gardner, 2008). Students' investment in developing and drawing on their academic networks emphasises the importance of independence from the supervisor as well as interdependence among colleagues (Jones, 2008; Hakala, 2009). Further, students' reported agency focuses attention on the individual's desire to deal with the challenges (personal and structural) as well as the pleasures experienced in doctoral work. Still, while identity-trajectory foregrounds agency, the interplay of agency with structure is integral. The role of structure is particularly strong in the institutional strand: resources are on offer but are accompanied by responsibilities which can constrain as well as support intentions as well as the development of the networking and intellectual strands. Further, the interaction of horizons for action with opportunity structures demonstrates the tensions around negotiating personal desires within available structures.

Additionally, much previous research has focused only on doctoral experience alone and has not followed individuals as they graduate and move on. Collecting data longitudinally, which Schlosser & Kahn (2007) have called for, enables tracking the futures that individuals construct – whether staying in academia, stopping out, or leaving. Thus, this work addresses a gap in the literature, the transition from doctoral education to work (Leonard *et al*, 2006). Still, since data collection occurs at discrete points in time it is only possible to approximate (Hounsell, 2011) the progression of identities and careers in the making.

Pedagogical and policy implications

Nevertheless, identity-trajectory provides a basis for reframing practice and policy (McAlpine & Amundsen, in press). Students are engaged in their doctoral journeys while purposefully striving to achieve life goals in relation to past and present experiences, relationships and responsibilities. Thus, their investment in doctoral work will vary. Implications of this finding include:

- Use the admissions process to explore students' intentions, personal relationships and related horizons for action, enabling the potential student and the institution to assess whether doctoral work is the best means to achieve the individual's goals.
- Incorporate strategies early on for students to gain a more textured knowledge of opportunity structures (academic as well as non-academic), critical given the difficulty of finding academic positions (Nerad *et al*, 2007). Students can use this knowledge in deciding the kinds of learning activities they should engage in during the degree.

As regards the networking strand, while students were intentional, the evidence directs us to consider how students' inter-personal and inter-textual networks can be more fully incorporated into doctoral pedagogies, important not only to intellectual and career development, but also potentially completion of the doctorate (Wright, 2003). Possible strategies:

- Make visible within the curriculum the importance of developing inter-personal academic networks – particularly given the expectation that future scholars will work collaboratively (Henkel, 2000).
- Explicitly focus on how to read strategically, as well as the purpose of reading (this may require advice from those with expertise in academic literacy).

As regards the intellectual strand, again students invested heavily in their intellectual work, but recognised their need for support, preferably offered within their specialism rather than generically. Implications:

- Embed an explicit curriculum about the disciplinary genres in pro-seminars or other contexts in which disciplinary epistemologies and methodologies are under discussion.
- Make writing-as-a-process visible, e.g., offering writing retreats, writing feedback sessions (academic literacy expertise may be helpful here).

As for the institutional strand, while all drew on the resources and most had some responsibilities many of which they enjoyed, these engagements were rarely framed pedagogically; reinforcing student agency in this regards should be central to doctoral pedagogies: position the student as able and willing to a) act independently of the supervisor, and b) draw on a range of resources often beyond the university. Some strategies:

- Create a website that links to resources, policies and practices related to financial, health and other non-academic concerns. Such a structure creates equity of support for both students and supervisors, particularly for new supervisors who struggle to find supervisory resources (Amundsen & McAlpine, 2009).

- Ensure, if not already the case, that students have membership on departmental, faculty and university committees.
- Provide financial and physical resources for students to collectively create their own development opportunities, e.g., writing workshops.

Lynn McAlpine is Professor of Higher Education Development at the University of Oxford, UK, and Professor Emerita at McGill University, Canada.

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Endnotes

1. While there have been many team members, three in particular have been involved for lengthy periods and made substantial contributions: Cheryl Amundsen, Nick Hopwood, and Gill Turner.

2. These 80 represent a portion of the overall research program which has also followed 50 post-PhD researchers and pre-tenure lecturers.

3. I am not suggesting that others ignore the personal; for instance, Mowbray & Halse (2010) refer to students seeing their personal and professional lives as intertwined. However, in identity-trajectory, the personal (and agency) are starting points and the personal is a constant point of reference in the analyses.

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