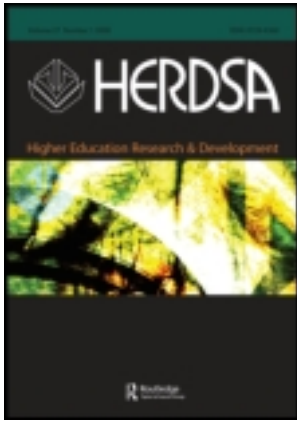


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More than just a brain: emotions and the doctoral experience

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While the epistemological and ontological challenges faced by doctoral candidates are well documented, the same cannot be said of the emotional dimensions of the journey. This paper draws on Activity Theory in exploring the role of emotion in the longitudinal doctoral learning experiences of six international PhD candidates studying in Australia. Analysis reveals that writing and supervision practices are common sites of tension but that the prevailing culture of silence militates against systemic change.

Keywords: doctoral education; international students; student experience

Introduction

Doctoral study involves numerous challenges. These range from the mundane pressures associated with living on a reduced income to the demanding task of constructing a scholarly identity. Consequently, many PhD students experience what has been described (in the context of tertiary study more generally) as a ‘rollercoaster of confidence and emotions’ (Christie, Tett, Cree, Hounsell, & McCune, 2008, p. 225). Why then do we hear so little about the emotional dimensions of the doctoral experience? Perhaps this can be explained by the academy’s historical distrust of emotion (Leathwood & Hey, 2009, p. 429) or the fear that discussing students’ feelings might morph into a ‘concern for the therapeutic rather than the pedagogic’ (Beard, Clegg, & Smith, 2007, p. 237). There is evidence that doctoral students suppress their emotions (Herman, 2010; Manathunga, 2005), yet ‘the emotional aspects . . . [of] research practice and . . . the formation of a scholarly identity . . . [are] deeply embedded in being a successful doctoral student’ (Thomson & Walker, 2010, p. 148).

This paper explores the emotion-infused experiences of six international doctoral candidates studying in Australia by analysing their participation in multiple interviews conducted over a two-year period. Despite claims that ‘paralyzing pressure . . . enormous stress and . . . loneliness . . . [are] the rule rather than the exception of doctoral student life’ (Hadjioannou, Shelton, Fu, & Dhanarattigannon, 2007, p. 161), the participants’ narratives reveal a relatively balanced interplay of positive and negative emotions. The rich data obtained in the longitudinal study exposed significant links between participants’ heightened emotions and their interactions with key individuals and situations in their doctoral lives.

The paper first reviews relevant research into the nature and functions of emotions in educational settings before outlining the study’s conceptual framework. The next section describes the study’s research design and methodology. Next, the participants’

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accounts of the emotions they experienced during their doctoral trajectories are discussed. The final section considers the implications for doctoral students, supervisors and programmes.

Emotions and the doctoral experience

Emotions have been conceptualised in humanities and social sciences research in two main ways: first, as ‘inherent’ and, second, as socially constructed (Lupton, 1998). Proponents of the ‘inherent’ approach focus on the biological and neurological components of emotions, viewing emotional states principally as physiological responses to stimuli. However, Lupton argues that this approach presents too linear a perspective on emotional processes by drawing an artificial distinction between emotion and thought, while ignoring the sociocultural context in which they occur.

The second approach – the one adopted in this paper – views emotions as learned behaviours, which are experienced and understood through social and cultural processes (Lupton, 1998). Accordingly, emotions change according to the historical, social and political context in which they are produced, experienced and expressed. Researchers, therefore, focus on exploring the implications of emotional experiences for individuals’ sense of self and their interactions with others and the environment (Dirkx, 2008).

Emotions are fundamentally implicated in all human behaviour. They shape perceptions, influence thinking, affect the ability to communicate and motivate action (Lupton, 1998). Recognition of the ‘emotionally laden’ (Schutz, Hong, Cross, & Osbon, 2006, p. 343) nature of learning has prompted scholars in educational psychology to explore the role of emotions in educational settings. They identify the functions of emotions as:

preparing and sustaining reactions to important events and states by providing motivational and physiological energy, by focusing attention and modulating thinking, and by triggering action-related wishes and intentions. (Pekrun, Geotz, Titz, & Perry, 2002, p. 96)

These processes are critical to the doctoral experience. Emotions provide doctoral students with the motivational energy to persist until graduation (McCormack, 2009). However, they can also inhibit thinking. For example, anxiety has been shown to interfere with doctoral candidates’ ability to write (Castello, Inesta, & Monereo, 2009). Emotions can also help in achieving desired outcomes, as Hopwood’s (2010) account of doctoral students’ experiences dealing with stress demonstrates.

Recent educational research views learning as a highly situated process in which emotions are treated not as ‘side-effects ... [but] as an integral part of learning’ (Eynde & Turner, 2006, p. 362). Schutz and his colleagues (2006) define emotions as:

socially constructed, personally enacted ways of being that emerge from conscious and/or unconscious judgments regarding perceived successes at attaining goals or maintaining standards or beliefs during transactions as part of social-historical contexts. (p. 344)

Three aspects of this definition inform this study. First, emotions are fundamentally relational. Second, emotions are linked to appraisals that are made on the basis of criteria embedded in the educational context. Third, emotions are influenced by the social-historical contexts in which they occur. Context will influence both the appraisal criteria and the way emotions are constructed and expressed (Zembylas, 2004).

All three components of emotion are highly salient in students' educational experiences. Both interaction and appraisal were central to doctoral students' participation in the scholarly writing groups Caffarella and Barnett (2000) investigated. The students reported that the process of critiquing others' writing and having their writing critiqued was 'powerful and useful [but] it was also highly emotional and at times frustrating' (p. 39). The influence of the social-historical context on emotions was highlighted in a graduate student's reaction to being labelled a 'first-generation student':

To this day ... I remain troubled and somewhat disturbed by it [the view that students whose parents did not go to university are disadvantaged] ... this was the first time I had ever come across such labels and ... the first time that I had ... been seen, labelled and/or identified as being deficient in some way. (Costley, 2008, p. 75)

One important aspect of the social-historical context in which emotions are produced is culture. Cross-cultural psychologists have identified significant cultural variations in emotions. These include differences in the rules that govern the display and expression of emotions and in the ways that events are interpreted (Zembylas, 2004). Differences have also been observed in 'appraisal propensities' (Mesquita & Frijda, 1992, p. 186), suggesting that some cultural groups have more of a tendency to, for example, attribute blame for situations than others.

However, the researcher rejects an essentialised view of culture sometimes associated with 'opportunistic and speculative forays into the available literature' (Bond, Žegarac, & Spencer-Oatey, 2000, p. 47) to explain differences in behaviour. Instead, she aligns herself with intercultural communication research that advocates paying attention to the ways that individuals manage social relations when they interact. Managing rapport concerns the universal need for 'face':

Face ... is concerned with people's sense of worth, dignity and identity, and is associated with issues such as respect, honour, status, reputation and competence. (Spencer-Oatey, 2000, p. 12)

Chang and Strauss (2010) report negative emotions associated with threats to 'face' perceived by Mandarin-speaking graduates studying in New Zealand.

As they face the challenges associated with PhD study, doctoral students look to their supervisors for support. Relationships that nurture learning create '[e]motional scaffolding [which] includes the gift of confidence,¹ the sharing of risks in the presentation of new ideas, constructive criticism and the creation of a safety zone' (Mahn & John-Steiner, 2002, p. 52). Confidence is critical to the supervision relationship. A group of international graduate students studying in Australia identified 'interpersonal experiences of acceptance, validation and support' (Ingleton & Cadman, 2002, p. 110) with their supervisors and others as essential in building their confidence.

This brief review suggests that emotions pervade the doctoral experience. The study reported in the rest of this paper explores situations where the participants' emotions emerged and the impact they had on their doctoral trajectories.

Conceptual framework

In line with other socioculturally-framed studies of doctoral education (Beauchamp, Jazvac-Martek, & McAlpine, 2009), this study adopts the theoretical lens of Activity Theory (AT) (Engeström, 1999). Activity Theory maintains that individuals construct

their knowledge by interacting with others and the environment. Activity Theory, therefore, has the potential to ‘link individual experiences with wider systemic elements and tensions’ (Hopwood & Stocks, 2008, p. 196) by exploring the relationships between individuals’ behaviours, their resources and their communities. Tensions occur when elements in an activity system (AS) interact since it is an ‘inherently . . . dynamic structure, continuously undergoing change in its parts, its relations, and as a whole’ (Roth, 2004, p. 4). Activity systems are described in terms of relations amongst six elements (Engeström, 1999): a *subject* is engaged in an activity whose long-term goal (*object*) requires the adoption of various *artifacts* (cognitive and material resources, concepts etc). The subject’s activity occurs within a *community* governed by *rules* and is characterised by various *divisions of labour* (see Figure 1).

When AT is applied to doctoral learning, the PhD student can be considered the subject of a departmental AS focused on the object of obtaining a doctoral degree. Doctoral students draw on a range of artifacts including individuals, ideas, texts and machines. The doctoral student’s community is made up of supervisors, peers, technicians and others. Various explicit and implicit rules dictate how doctoral candidates should function within the departmental AS. The division of labour describes the different roles that community members adopt in carrying out the tasks that are the object of the system. All these elements are subject to change over time. The way that subjects represent the objects of their different ASs motivates and guides their trajectories – ‘[t]he complex nature of the relationship between subjects and objects . . . is characterized as “passion” . . . “desire” [and] “contradiction”’ (Kaptelinin, 2005, p. 5). Doctoral students participate simultaneously in multiple ASs, including their academic department, their disciplinary community and their family. Analysing doctoral students’ interactions with other elements in the different ASs they inhabit can shed light on what triggers their emotions and how they influence their doctoral trajectories.

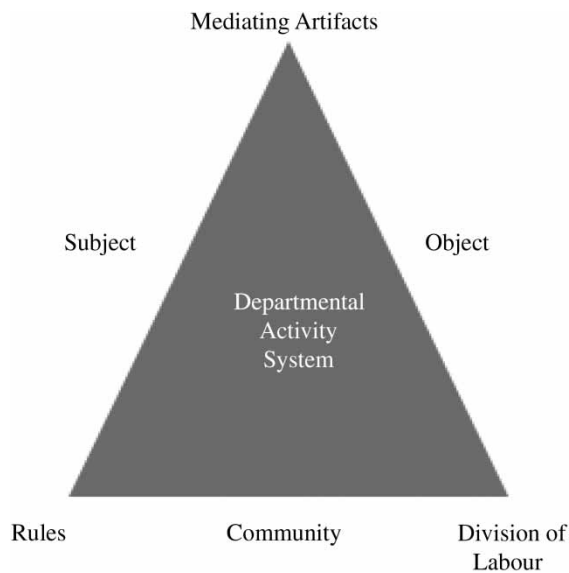


Figure 1. Doctoral student’s departmental activity system.

Research design and methods

This study is part of a longitudinal narrative inquiry (Clandinin & Connelly, 2000) into the lived experiences of six international doctoral candidates studying in Australia. The participants, who had been enrolled for between one and 14 months at the time of their first interview, attend a large metropolitan university where more than 37% of PhD students come from abroad (Institution Higher Degree Research Office, 2010). Given the study's goal of developing detailed longitudinal narratives based on multiple interviews, the researcher recruited six international doctoral candidates who were diverse in terms of gender, age, first language, discipline, stage of enrolment and family situation. Comparison of the participants' profiles with those of the university's international PhD population indicated that two (China and India) of the four principal source countries and two (Science and Human Sciences) of the three most popular faculties were represented (Institution Higher Degree Research Office, 2010).

This article draws on the transcripts of 35 hour-long interviews conducted between May 2009 and June 2011 and a small number of email exchanges aimed at clarifying issues identified during the transcription process. The researcher conducted interviews with each participant on their campus three times per year for two years. The fact that the researcher was also a doctoral student helped establish rapport with the participants, despite differences in age and background. Details of the participants and the pseudonyms they created for themselves are presented in Table 1.

Data analysis involved repeatedly listening to the audio files and re-reading the transcripts to identify all emotion-related episodes. Each episode consisted of an antecedent (e.g. supervisor's feedback, revising an article) and one or more emotions. Episodes (which ranged from three to 53 turns) were identified using linguistic, non-linguistic and contextual cues. Linguistic cues included the use of explicitly emotive language ('I felt really *irritated*'; 'it was *humiliating*') and swearing since '[t]he main purpose of swearing is to express emotions, especially anger and frustration' (Jay & Janschewitz, 2008, p. 267). In a small number of instances (e.g. Emily, 5, 593–629), contextual cues were used to identify emotions participants conveyed *indirectly* by providing lengthy descriptions of challenges they were facing. Non-linguistic cues observed in the audio files included changes in intonation, sighing, crying and laughter (and corresponding notes in the transcripts). For instance, Dev's intonation when he commented 'nothing is really working out for me right now' (Dev, 6, 861–862) signalled profound

Table 1. Participant details.

Name	Gender	Age	Country of origin	Faculty	Family in Australia?
Ariunaa	Female	36	Mongolia	Science	Husband and two sons
Dev	Male	25	India	Human Sciences	No
Emily	Female	30	North America	Human Sciences	Husband
Jack	Male	29	Kenya	Business and Economics	No
Journey	Male	40	Indonesia	Business and Economics	Wife and daughter
Mary	Female	20s	People's Republic of China	Science	Husband

discouragement, thus qualifying this episode for inclusion in the analysis. Once all the emotion episodes had been identified, they were mapped onto the activity system in which they had emerged.

Research that aims to investigate emotions entails a number of challenges. First, people experience and describe emotions in different ways (Edwards, 1999) – this phenomenon has been described as ‘the challenge of languaging experience’ (Sheets-Johnstone, 2009, p. 390). The fact that the participants discuss their emotions in a second language adds to the complexity. Second, it is not always easy to determine what is and what is not an emotion. However, by attending to participants’ verbal and non-verbal messages, as well as recurring themes, emotion episodes were identified in all six narratives. The final challenge concerns the fact that emotions are dynamic and often short-lived (Sutton & Wheatley, 2003). This paper may, therefore, under-represent the incidence of emotion in participants’ experiences.

Emotion episodes in participants’ narratives

This section reports emotion episodes that emerged in the participants’ (*subjects*) interactions with other elements in the ASs in which they operated. Numbers appearing after participants’ names in brackets indicate interview and transcript line numbers, respectively, and ‘R’ refers to the researcher.

Objects

Almost one third of the emotion episodes reported concerned participants’ efforts to accomplish particular *objects*. One *object* that generated a lot of emotion was writing and given the salience of appraisal in writing activities, this is hardly surprising. The challenges associated with writing in English generated particularly strong emotions:

sometimes ... I know what I’m doing but it’s difficult for me to express in different language ... and sometimes I get angry with myself ah yeah you know ... you know what you want to say but it’s not actually there. (Journey, 2, 747–753)

In addition to triggering anger, anxiety and frustration, participants complained that writing was time-consuming and took time away from other activities. Given these challenges, participants expressed joy and pride when their manuscripts were accepted for publication. Ariunaa described having her first journal article published as a ‘fantastic and amazing’ experience. This success surprised and delighted her, boosting her confidence and enhancing her motivation.

However the *objects* on which participants focused were not all directly associated with their research projects. A year before she was due to submit, Mary reported that she and her husband had started discussing job prospects:

M: We started thinking about that [the future]. Yeah, for him I think, I don’t worry about him at all. And ah for myself, there are some worries.

R: What kind of worries?

M: Ah, ah about what kind of job I can find and ah I have to get good publication to get a good ... academic career. (Mary, 4, 1556–1562)

Mary’s anxiety about finding an academic post was exacerbated by knowing that her student visa would expire shortly after she submitted her thesis. If she was to remain

in Australia while her husband completed his PhD, Mary would need a job offer. This anxiety therefore compounded her concerns about producing high quality publications and completing on time.

Community

Almost one quarter of the participants' references to emotions concerned interactions with members of their different *communities*. Their experiences within their departments were uniformly negative, while their interactions in their respective disciplinary communities were (in all but one case) extremely positive.

Emily complained in three different interviews about her department's unfriendly culture and felt 'very, very troubled' (Emily, 1, 741) at what she perceived as a lack of welcome and orientation when she first arrived. She was also disappointed at the lack of opportunities to share ideas with other PhD students in her department. Journey was surprised and disappointed at being unsuccessful in developing collegial relationships with other academics on campus, despite initiating contact. Ariunaa, Dev and Jack also regretted the absence of peers with whom to discuss ideas. This lack of departmental community sent a powerful (unintended?) message that scholarly research is a solitary affair.

In contrast, participants' interactions with their disciplinary *communities* at conferences and in the publication process were highly positive. Jack's account of attending a 'very prestigious' international conference in Europe conveys his pleasure and pride:

that was really interesting because ... it gave me really good feedback ... during the break people were coming to me ... and they were telling me they are impressed about what I am doing ... (Jack, 4, 271–280)

By participating in this conference Jack experienced the satisfaction of being recognised as a researcher by others in his disciplinary *community*. Journey contacted two international experts in his field about a paper he was writing and was delighted to receive positive feedback on the work he was doing. In both cases, this emotional boost was converted into enhanced confidence and motivation.

Emily was the only participant, however, to speak about a strong sense of disciplinary *community* in Australia. By participating in conferences and co-authoring a journal article she obtained:

E: ... good feedback ... it gives you this confidence and ... I feel I'm being ... taken care of in this [name of discipline] community very well in Australia. I don't know what happened where exactly it came but ... I feel they ... want to care about me. I don't feel it's everyone's case ...

R: Don't worry about where it comes from! That's just positive because –

E: No, I take it, but ... I'm realising that ... I'm in good hands and I have good people around me ... they must – they believe in me, that's the thing. (Emily, 4, 473–490)

Recognition by members of her disciplinary community made Emily feel confident, secure and proud, adding momentum to her research trajectory. Interestingly, she observed that not all doctoral students received the same positive treatment.

Unfortunately, Dev's interactions with members of his local disciplinary *community* triggered strong negative emotions. When he requested permission to recruit research participants at a clinical facility associated with his department, Dev was told he needed to complete new ethical consent procedures (*rules*) despite his having

already obtained ethical consent from his university. When Dev hand-delivered his lengthy application a week later, the administrator suddenly requested additional documents. Dev felt frustrated and took offence at the administrator's insinuation that, being Indian, he might not appreciate the importance of human ethics requirements in conducting research:

... she was trying to ... say, you know ... these are solely procedures here, not like your country where nothing is there [laughs]. Yeah it was pretty much like that ... (Dev, 5, Line 667–669)

These interactions and the subsequent delay to his data-gathering angered and frustrated Dev. Two months later, while giving an invited presentation at the clinical facility, Dev was interrupted by clinicians and questioned aggressively until:

... then they told yeah that's it, you can go now and we have to wrap up for another meeting, so ... I was really embarrassed and kind of really humiliated ... (Dev, 6, Line 208–210)

After the meeting, Dev received an email from the administrator containing a series of questions about his project for him to respond to. Dev felt it was inappropriate (*division of labour*) for the clinicians to question him in this way, viewing this as a challenge to his, and his supervisors', competence – 'I was damn really irritated, frustrated and ... extremely cold in a profoundly disturbed way' (Dev, 6, 224–226). Dev's swearing conveys the suppressed anger he felt at the way he had been treated. However, he was not just angry. His self-confidence had been seriously damaged – 'I'm right now having a very low esteem' (Dev, 6, 1195).

Division of labour

The third aspect of the participants' experiences that generated a lot of emotion was their interactions with their supervisors. Most of the participants' comments about their supervisors were positive, with individuals acknowledging their efficiency (Emily), support (Dev), feedback (Mary) and friendly manner (Ariunaa). Journey explained that his supervisors' trust in his ability had given him the confidence to begin writing:

J: when ... you are a person from an environment that is not really value publication as it is here, and then you come to this place –

R: – to compete on an even footing –

J: Yes ... I was very happy that my supervisors yeah they trust me, tried to motivate me – 'Yes you can, you have experience' and ... when we discuss content-based knowledge, ah maybe they said – 'Yeah ... you have'

R: Mmm

J: Then ah one of them at that time started to ask me to write a paper. I guess it's a kind of recognition that you ... can do that. So, yeah that's part of things that strengthened myself that I ... could do. (Journey, 6, 720–738)

However, differences in supervisor and student expectations generated some temporary difficulties. Ariunaa felt confused and stressed for the first three months because she did not know what was expected of her as a PhD student. Emily felt stressed and anxious trying to decide how to sequence her co-authors' names in a forthcoming article:

E: Now on the second one I'm having some problems with it, because ... now my co-authors are giving very different amount of inputs ... and one of them is trying to keep the work just between me and him [laughs]. And it's very clear, like – 'Let's just work, I know they are saying that, I know they think like that, but let's just keep it between you and I, we'll continue just sending it back and forth ... Ok? And I know they think differently, you think differently, but now this is what we're going to do.' [laughs]

R: How do you feel about –?

E: [laughs] So that's the situation. (Emily, 5, 593–629)

Emily's evasive response to the researcher's question may indicate her reluctance to blame her stress on her supervisor's behaviour (Mesquita & Frijda, 1992). Given the contextual variables of power, interactional roles and message context (Spencer-Oatey, 2000) at play in this situation, Emily was negotiating highly complex competing 'face' needs. This (abbreviated) excerpt illustrates how a detailed description of a problem can indirectly convey participants' unnamed emotions.

The most striking instance of sustained tension in the supervision relationship emerged from Jack's narrative. Whereas he had enjoyed an excellent relationship with the supervisor of his Masters degree in Europe, his relationship with his PhD supervisor in Australia was problematic:

OK, there was friction because ... he gives me a textbook which he thinks might be useful ... I have to read through it maybe like for three weeks ... probably it is a textbook which is 600 pages of Mathematics and then after that ... he quizzes me and ... I was opposed to that because ... I'm already past that level ... so there was a sort of friction for some time until I was just thinking should I just go back to [European country] and just continue with my professor ... and then I thought it wasn't of any point to keep arguing with him you know ... because ... when you're arguing with a professor ... the truth is you really have a lot to lose ... so I just compromised ... and then sort of we started developing a relationship ... (Jack, 1, 260–286)

Jack considered the role his supervisor assigned him (*division of labour*) inappropriate and face-threatening. However, conscious of the power dynamics at work, he chose not to resist. Instead, he lowered his sights (*object*) and chose to focus on 'just finishing' the PhD:

I guess there was a lot of ambition, but ... you just reach a point where you don't really care anymore what happens, all you need to do is just ... try to see if you can have the results and try to finish. (Jack, 2, 902–913)

Despite indicating that their relationship had improved, in three of his four subsequent interviews Jack mentioned that his supervisor was too busy to see him, explaining – 'it's easy to get discouraged ... there are days he was rough ...' (Jack, 4, 908–909). When asked to explain, the colourful way Jack paraphrased his supervisor's appraisal of his work revealed his suppressed anger:

J: at the beginning well I could write stuff and ... he doesn't understand it so – 'it's bullshit ... it's rubbish'. Well I would like –

R: Would he actually use that word with you?

J: Of course he would say it doesn't make sense to him. (Jack, 4, 918–923)

Tellingly, Jack compared his PhD experience to an initiation ritual he experienced as a young man – 'a painful experience' which demanded 'endurance' (Jack, 5, 653–664)

but which ‘of course, no-one will ever tell you about’ in much the same way, he suggests, as ‘a lot of PhD students hide the difficult part’ (Jack, 5, 681).

Ariunaa’s PhD experience is complicated by the fact that she is also a wife and mother. She, therefore, experiences tension when the *objects* and *division of labour* in her PhD and family activity systems are in conflict. Shortly after Ariunaa and her family arrived in Australia, her two-year old son began experiencing seizures. Ariunaa worries constantly about him but also fears she is not spending enough time on her PhD. One day Ariunaa recounted a harrowing story of having spent three sleepless days and nights at the hospital with her son following a severe seizure. During that time she was unable to contact her husband or to eat because she had left her phone and wallet at home in her rush to meet the ambulance. Through her tears, Ariunaa explained that she had not told her supervisors this story – ‘Because that’s just my life and I should . . . manage my life’ (Ariunaa, 3, 2161).

Artifacts

The participants’ interactions with *artifacts* generated few emotions apart from Journey, Mary, Ariunaa and Emily commenting positively on the valuable feedback they received from reviewers of their manuscripts. However, one *artifact* that created anxiety for Ariunaa and Mary was their English language proficiency. Ariunaa’s anxiety about her English was a constant theme in her interviews. Eighteen months after enrolling, she commented:

I feel my progress is of course always slow[er than] another PhD students . . . I think the reason is first the family, the second is the English barrier. (Ariunaa, 3, 566–568)

There is little doubt that Ariunaa’s anxiety about her English (and her son) distracted time and energy from her project. Mary was disappointed that after three years of doctoral study in Australia she was still unable to speak ‘normal’ everyday English. Her situation was complicated by the fact that her supervisor (also from China) chose to communicate with her in Chinese.

Rules

A limited number of emotion episodes concerning participants’ interactions with *rules* were identified. The most significant example (already discussed) concerned Dev’s frustration at having to negotiate a second ethics approval process.

Discussion

What can be learned about emotion and the doctoral experience from viewing the participants’ experiences through the lens of activity theory? First, activity theory provides a useful tool for identifying systemic sites of tension. Writing practices and supervision encounters emerge as sources of considerable tension in the participants’ accounts, both are linked to appraisal, which has been shown to trigger emotion (Schutz et al., 2006). Previous research also links emotions with writing and supervision in the doctorate (Caffarella & Barnett, 2000; McCormack, 2009). Given that even accomplished writers experience anxiety when they write, doctoral students need access to better writing pedagogy (Paré, 2010). Supervisors engaged in intercultural supervision should monitor the impact of their pedagogies and styles, enhance their understanding

of their students' approaches to learning and include them in a supportive research culture (Manathunga, 2007).

Second, activity theory highlights the significance of the way participants represent the *object* of their doctoral study. At the end of her first year Emily explained:

the more I'm doing everything, the more I'm testing, the more I'm gathering data, the more I'm reading, the more I'm discussing – I'm building a confidence through all of that and getting stronger. (Emily, 3, 1401–1404)

In viewing the *object* of her doctoral experience as becoming a confident researcher, Emily's goals and values coincide with those of the academy. Although Journey views the *object* of his PhD in collective terms, this perspective too is easily accommodated by the academy. Through his PhD, Journey hopes to convince his Indonesian colleagues that they too can participate in international research:

I should communicate ... with them ... remind them that it's all about efforts, it's all about ah commitment ... maybe come up with failures, but you have to try. ... So I've done my part, though it's small and shows us that yes we can! (Journey, 6, 1036–1044)

Jack, on the other hand, finding himself 'arguing with a professor ... [with] a lot to lose' (Jack, 1, 283) decides to submit to his authority and focus on the less challenging *object* of timely PhD completion.

However, activity theory is less well suited to illuminating the *causes* of tension, since these reside in conflicts surrounding values and goals. Mary's goal of improving her English was thwarted by her supervisor's decision to communicate only in Chinese, yet her respect for her supervisor prevented her from objecting. Dev's 'humiliation' at the hands of the clinicians delayed his goal of recruiting participants but his concern for their 'face' prevented him from challenging their behaviour. Ariunaa's decision to suppress her anxiety about her son may have been prompted by observing the 'care-less' (Lynch, 2010) culture of the academy which 'values ... competitive ... and individualistic practices' (Bansel, 2011, p. 552). Unfortunately, the 'culture of silence' reflected in Jack, Mary, Dev and Ariunaa's responses militates against change occurring in the AS of doctoral education. Anecdotal evidence from the researcher's network of (local and international) doctoral students suggests that the tensions experienced by the participants are common, as are their reactions. Their silence may have less to do with culture than power.

Examining participants' interactions in multiple activity systems highlights the tensions that can occur when individuals' *objects* and roles in different ASs conflict. It also revealed the poverty of participants' experiences of *community* in their departments compared with their rewarding disciplinary *community* interactions. Carlone and Johnson (2007) suggest that it is not uncommon for researchers to experience less recognition within their own departments than in the wider research community. Suggestions for enhancing the departmental environment include cultivating peer networks (Devenish, Dyer, Jefferson, Lord, van Leeuwen, & Fazakerley, 2009) and establishing writing groups (Li & Vandermensbrugghe, 2011). Given the lack of *community* in their departments, it is perhaps not surprising that Dev and Emily valued the research interviews as an opportunity to reflect:

I think that every PhD student should have ... someone doing a PhD about PhD students ... [laughs] ... someone detached, not your supervisor ... not anyone in your department,

that can just see how are you doing, and how are you feeling through all that, because it is a long road . . . and there's a lot of things attached to this road . . . (Emily, 6, 1812–1813)

Finally, activity theory proved less well suited to exploring the *subjects* at the heart of the doctoral experience (what was the precise nature of Jack's PhD 'compromise?') than to identifying the tensions they experienced and their impacts. Furthermore, interesting metacognitive themes such as Journey's observation that writing for publication is simultaneously useful and painful could not be captured within the activity theory framework.

Conclusion

Emotions play a complex role in doctoral experiences. Emily sent the following email message to clarify a comment she had made (in an interview) about being in 'an emotional state' (Emily, 3, 607) while writing her first journal article:

I think I just wanted to be really good. . . . So many people around me already had articles published. Now it was my turn to try . . . Funny that I did not remember it being emotional . . . because this Monday, I finally got this article accepted for publication. And guess what: tears started running down my cheeks and then I laughed so much because it was the first time I was crying of joy and thought this is not at all the type of occasion that I should be crying of joy (this should be reserved to your wedding, seeing . . . good friends after a long time apart) . . . But hey, that's how it went! (Emily, Email message, May 4, 2011)

Emily's powerful emotional response to having her work published underlines the intimate connection between writing and the construction of scholarly identity (Kamler & Thomson, 2006). However, experiences of emotion like this are often omitted from accounts of doctoral experience (Lee & Williams, 1999) so that 'knowledge and intellect come to describe and define the whole person' (Bansel, 2011, p. 547).

The researcher acknowledges a number of limitations with this study. First, it focuses on the perspectives of a small number of individuals who come from extremely diverse linguistic and cultural backgrounds. However, the goal of this research was not to identify universal 'truths' about international doctoral students' experiences but rather to take an in-depth look at the perspectives of six individuals. Second, the study investigates a highly complex phenomenon with comparatively blunt tools.

However, the results vindicate the researcher's efforts since emotions have been shown to pervade the doctoral experience. Activity theory highlights the potential for candidates' interactions to enhance or diminish their confidence, signalling the responsibility of those who wish to support them. If acknowledged, emotions can inspire, guide and enhance research (Herman, 2010); if ignored or suppressed, they can delay and even derail it. By acknowledging the emotional dimension of doctoral students' experiences, supervisors, departments and institutions can better support their research trajectories.

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Note

1. A term borrowed from Jean-Paul Sartre (as cited in de Beauvoir, 1984, p. 168).

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