Critical thinking is closely aligned with the higher in higher education – as a core element of ‘graduateness’ (QAA, 2011) and representing a key added (non-financial) value of pursuing a higher degree. Moreover, the ability to instigate and foster critical faculties amongst students within the academic community arguably represents ‘the defining concept of a Western university’ (Barnett, 1997, p.2). Yet, while deeply embedded in the institutional meta-language of teaching and learning in the academy, this seemingly benign and transparent intellectual value has multiple meanings and enactments – from a rationalist approach to knowledge to an ethical or activist stance (Moore, 2011). Despite this variance, certain meanings dominate academic understanding, particularly the notion of critical thinking as a skill or technology (e.g. Fisher, 2001; Halpern, 2003; Bailin and Siegel, 2003; Paul and Elder, 2006). These approaches to criticality tend to presume a decontextualised critical ‘subject’ who applies a series of rational, cognitive processes to interrogate truth claims objectively - arguably obscuring the complex and contingent nature of higher education learning. Indeed, Fenwick and Edwards (2013) state that knowledge practices in higher education, such as critical thinking, are not fixed but contingent and negotiated processes sustained by ‘multifarious capillaries of associations and action’ of texts, materials and bodies (p.37). Furthermore, as I explore in Danvers (2016), critical thinking is an intensely affective process with students revealing considerable anxieties about getting it ‘right’. Thus rather than understanding doing critical thinking as a set of tangible, transferable and measurable skills and competencies, this chapter reimagines becoming critical as a highly contextualised, contingent and embodied set of practices. It then asks what the pedagogical implications might be of re-thinking critical thinking in this way, using the feminist theorisations of Karen Barad (2007, 2010, 2012a, 2012b).

After briefly introducing the research on which the data is drawn, the chapter re-thinks critical thinking using three conceptual claims. Each claim will be followed by some ‘thinking with’ (Jackson and Mazzei, 2012) a singular excerpt of data in order to generate both broad pedagogical approaches, as well as a specific idea for an activity to develop undergraduate students as critical thinkers. Firstly, in shifting the focus away from critical thinking as an individualised act of ‘reasoned’ bodies and reasoning minds this chapter suggests an activity to interrogate the conditions and boundaries that make critical thinking possible in particular spaces, moments and bodies. Secondly, in unpacking the complex ways critical thinking makes us feel, it suggests some ways for classrooms to pay attention to the role of affect in shaping our becomings as critical thinkers. Finally, in recognising how the production of ‘legitimate’ critical voices is shaped by different social locations, it explores an activity to generate equity and inclusivity in critical thinking pedagogies.

I have implemented these pedagogical suggestions in my teaching with undergraduates in a number of higher education institutions but they are by no means failsafe ‘tested’ approaches that guarantee ‘results’. Instead, they should be seen as techniques that are aimed at shifting/reimagining what makes a critical student and how the development of students’ critical faculties could be conceptualised in ways that position students as embodied and contextually-located selves.

A new material feminist analysis of criticality

The research, on which the pedagogical claims emerge, consisted of qualitative research with two cohorts of first-year undergraduates at a UK research-intensive university. These were divided into two cohorts of students – an applied social science discipline (named ‘professional’) and a more theoretical social science (named ‘academic’). Over a period of three months I conducted loosely structured observation of
students in their weekly lectures and seminars for a compulsory module themed around academic skills development. I also interviewed 15 of these students at the beginning of their first year at university and conducted focus groups with 4 of these students at the end of that academic year. These research encounters explored how undergraduate students understand what critical thinking means, what it requires, what it makes possible, and its role in their studies, lives and futures.

These data were then analysed using a critical, feminist sociological theoretical framework. In particular, Karen Barad’s feminist agential realism (2007, 2010, 2012a, 2012b) allowed me get to grips with how students negotiate the multiple discourses of what it means to be critical, as well as how criticality’s affects work through, and impact upon, student bodies. For Barad, phenomena (which could include the concept of criticality) do not pre-exist but emerge through intra-action, defined as:

The mutual constitution of entangled agencies. That is, in contrast to the usual ‘interaction’, which assumes that there are separate individual agencies that precede their interaction. (Barad, 2007, p.22)

This challenges me, in line with Fenwick and Edwards (2013), to think about criticality as an entangled socio-material-discursive knowledge practice in flux that comes into being in the relations between institutions, discourses and bodies, rather than a disembodied models of the thinker as sole author of ‘his’ own critique. Furthermore, it also requires re-positioning the critical thinker as a critical body engaged in educational processes not just cognitively, but emotionally, socially and materially (and consequently shaped through these contexts. This further chips away at the Enlightenment/ Cartesian binarism that persists in separating the ‘reasoning mind’ from the critical body and instead offers new philosophical imaginaries that recognise both the situated place of the human within practices of thinking and that the human might not be the only, or the most important, force at work.

Reimagining criticality through Barad’s specifically feminist analysis arguably allows both a deeper exploration of how critical thinking legitimates itself through different bodies, as well how it gets constituted through higher education’s structures of power and inequality. Indeed, Quinn (2013) states that one of the strengths of thinking about education using feminist new-materialist philosophies enables researchers to identify:

The interconnectedness of all matter, so that the project of learning becomes not what distinguishes me from all that is around me and makes me superior to it, but what makes me part of it. (p.742)

Consequently, by looking at critical thinking as a series of intra-connected affective and bodily processes (rather than, for example, simply cognitive ones) this shifts emphasis away from masculinist conceptions of the rational and knowing subject to imaginaries which pay attention to the role of the senses in higher education pedagogies. Furthermore, instead of understanding pedagogical practices as being fixed and stable, a feminist new materialist analysis highlights how the experience of critical thinking shifts in accordance with the social, embodied and relational contexts in which one is entangled at any particular moment. In so doing, this offers a conceptual challenge to dominant neoliberal discourses of university learning as transparent, measurable and transferrable. Barad’s feminist agential realism also offers a deeper focus on the interconnections between critical thinkers and their context and the acts of boundary making that constitute practices of criticality and what and, importantly, who they include/exclude. This allows the important recognition that critical thinkers are not neutral subjects but gendered, classed and raced bodies and becoming a critical thinker is inseparable from the ways bodies are unequally positioned in the academy. In particular, Barad’s theorisations of the performative unpack how critical
voices materialise themselves to certain bodies as a consequence of the entanglement of social-material-discursive phenomena, which produces particular optics in which certain bodies/identities are deemed legitimate/illegitimate.

The following 3 sections provide a vignette which establishes how to think with new materialist feminism about critical thinking, including a pedagogical example of how that might work in practice.

**Thinking as an entangled practice**

What it means to be a critical thinker is more than just an individual cognitive process of interrogating truth claims by asking questions. Instead, it *intra-acts* (Barad, 2007) with multiple other dynamics, relationships and identities in the higher education classroom. For example, the following note from an observation of the professional class describes students engaging with a critical review of a research article:

>The task to prepare for the professional seminar this week was to read and critique a journal article from a selection chosen by Jo [the module leader] and to bring a draft critical reflection on it to discuss in the group. We separated into two groups for discussion and I went with a group to a room across the corridor, away from Jo. As we started talking one student, Lauren, confessed that she’d only just realised that the article she’d critiqued in her reflection was one Jo had written. Lauren’s face went red and she seemed frustrated at herself for not realising sooner, saying ‘how am I supposed to be critical of her...what will she think...what can I say’. She was hastily trying to read through her notes ‘to check I haven’t said something bad’. (Observation of the Professional Class)

Lauren appeared to strongly connect critical thinking with its negative etymology of being critical as ‘bad’. This then became a particular concern because of her perception of how Jo might react as both the academic expert but also, fundamentally, the person marking her work. Moreover, Jo being in a different room produced a specific confessional atmosphere, which shifted in formality and tone into Lauren’s silence once we returned to the shared classroom. What the ability to *do* critical often assumes is equal access to *speaking* critical. However, this overlooks the unequal power relations between lecturers and students, as well as how critical voices are embodied and thus shaped by differential class, racialised and gendered experiences. Furthermore, the excerpt also reveals how students’ anxieties to get critical thinking ‘right’ intra-act with the dominance of assessment discourses, particularly given that contribution to seminars was assessed by the tutor. So while Jo’s intention when we discussed the course was to enact a critical pedagogy of openness and debate, positioned by Canaan (2013) and others as being ideal for developing student criticality, this potentially sat problematically alongside neoliberal discourses of education’s marketised value and learning’s need to be tangibly evidenced, measured and performance managed (discussed by Brown, 2015).

Therefore, what could be seen as a relatively straightforward critical thinking pedagogical task is, in actuality, reliant on the mutual constitution of intra-acting material-discursive factors. These include students and their embodiments and histories, their intra-actions with other bodies, institutional cultures and norms, pedagogical practices, intellectual histories and epistemologies and dominant political and policy concerns. Thus critical thinking is an accumulated practice that is sustained in and enacted through the material worlds it brings forth. This aligns with Mazzei (2013) who describes knowledge as a continual process of ‘constituting and being constituted in the process’ (p.777) and Barad (2007) who states that knowing never takes place in isolation but as constituent parts of the world make themselves intelligible to each other. This challenges critical thinking’s historicised position as a fixed
and knowable practice of ‘reasoned’ bodies engaged in cognitive battling and instead offers new philosophical imaginaries that recognise both the situated place of the human within practices of thinking and that the human might not be the only, or the most important, force at work.

Pedagogically, this means refocusing attention away from students and the individual, cognitive nature of their critical development and instead focusing on what particular contexts make different critical processes and behaviours possible. It is also about interrogating the conditions and boundaries that make critical thinking possible in particular spaces, moments and bodies. The following pedagogical activity provides a practical way to emphasise the collective nature of critical thinking and the multiple forms it can take, as well as a way to reconceptualise the porous nature of the boundaries between the critical knower, their knowledge and the context in which learning takes place:

**Pedagogical Exercise 1: Entangled Criticality**

The purpose of the activity described below is to destabilise the focus on the critical thinker as a singular ‘knowing’ figure by having multiple, structured, opportunities to practice critical thinking verbally and in writing and individually and collectively.

1. Students are asked to prepare for the session by reading two journal articles which have opposing points to debate on a topic and to sum up each article on a single post-it note.
2. At the beginning of the class students are asked to put the anonymous post-its around the room – with one side of the room for each article and take 5 minutes to walk around and read them quietly. Give time to feedback any initial thoughts and reflections about what they thought about the readings.
3. Divide students into two halves reflecting the two different articles. In smaller groups students are asked to critically reflect on the arguments presented in their article as a group on flipchart paper. Provide a list of suggested critical review questions e.g. How convincing are the arguments? What evidence is used to support the claims made? Put the finished paper on the wall and ask students to walk around again and read them. Give time to reflect and feedback encouraging students to think about whether these ideas ‘belong’ to an individual.
4. Each member of the group must now write down a couple of sentences of individual critical reflection about the articles they read to feedback to class verbally. This could be something they feel the articles did not cover adequately, some evidence to support or refute the claims made or a suggestion for further research about the topic.
5. Facilitate a debate around the topic but emphasise everyone has to say something at least once, using the statements they have come up with.
6. Conclude by emphasising how students have successfully performed critical thinking verbally and in writing, as well as collectively and individually.

This pedagogical exercise provides space to discuss the ways in which being critical is entangled with individual and collective ideas about knowledge, as well as how it intra-acts with the multiple verbal and written ‘performances’ required by students in university settings.

**‘Feeling’ Critical**

In addition to critical thinking being an entangled, contextualised set of processes, a further emergence from the data was that critical thinking was an intensely affective experience. The students in the research did not simply do it, they felt it and critical thinking was always encountered as an affective experience of some kind, even if it seemed tempered or neutral. As I have described elsewhere (Danvers,
2016), students appeared to feel their way through the complex affects of both desiring the transformative power of criticality whilst also wishing to disassociate from its negativity. Moreover, critical thinking’s affects appeared to flow, to be produced in relation to others, things and bodies, and to reveal themselves through specific moments or ‘affective intensities’ (Ringrose and Renold, 2014, p. 772). This is particularly apparent when analysing my interaction with Camille, a student from the academic cohort.

I met Camille for our interview several weeks after a class where the class were asked to think about how they developed our opinions on a series of topics such as abortion, crime and poverty. She referred to this task several times during our discussion as she ‘felt really bad after it’. What specifically troubled her about critical thinking was the need to develop independent opinions from those of her parents, whose influence she felt strongly. Though she felt she would be ‘more fulfilled’ if she can think critically she was also ‘afraid of what people might think’. She continues:

Because if you have your own ideas then obviously people have their own ideas as well, so you might lead to conflict with others...you don’t want to show off too much because then you might like ruin your friendships or the relationships you have with others. (Camille, I)

Camille was also acutely aware of the negative sociality produced by having independent opinions and, again, echoed gendered notions of feminine submissiveness in her concern about not ‘showing off’ by having the wrong kind of critical voice. Yet at the same time, she felt insecure that her opinions were not yet ‘independent’ enough because of the influence of her parents and that this might hold her back in her intellectual and personal development. These good/bad feelings were not isolated from each other but flowed, coincided and clashed as a set of entangled, intra-acting practices (Barad, 2007) such that becoming critical involved considerable conflict experienced at the level of affect.

Camille was born to a middle-class family of musicians and was studying outside her country of origin, although she later noted that such educational mobility was ‘the norm’ for her peers from international boarding schools. She describes how academic and political discussions were regular occurrences in her family home and that having strong, informed opinions was a prized attribute both at home and school. This created a distinct classed pressure shaping becoming critical, which generated intense and lingering feelings. Such affects produced a material and bodily response in her feelings of anxiety and were also shaped through social relations as mediated through her relationship with her parents and her discursive concerns for what she should feel. The boundaries therefore become blurred between what critical thinking is, could/should be and does, indicating that it is a complex practice that is not easily bounded, with multiple temporalities relating to students’ past, present and future. Moreover, because students like Camille struggled not simply with the academic language of critical thinking, but also the tensions of what it meant to embody a ‘critical’ persona, this demonstrates how becoming a critical thinker is not a simplistic act of thought and action but deeply entangled processes of becoming critical which produces intense, conflicting affects.

The students in the research appeared to construct notions of acceptable critical voices that balanced being listened to with living the good or liveable life (Berlant, 2011, Butler, 2004). Thus critical and feminist educators face considerable challenges in making deconstructive critique simultaneously ‘pleasurable’ or more pleasurable than sticking with the known. Yet as a consequence of ‘becoming’ a critical thinker being described as an emotionally unsettling process, there needs to be at least some recognition by teachers of the emotional subtext shaping what could seem at first to be a neutral pedagogical behaviour. However this can be problematic in that the resulting pedagogic ‘emotion work’ requires specific performative demands for students to care and share (Macfarlane, 2014); can provoke complex emotional responses in the classroom which generates specific affective labour responsibilities for feminist educators (Morley, 1998); and can fail to address who can perform the emotional ‘subject’ obscuring important feminist concerns with inequality and power (David and Clegg, 2008). Therefore, instead of this being simply a time to do ‘feelings’, this emotion work should be theorised and politicalised.
for students by showing that academic identities are neither fixed nor straightforward and that engaging with critical knowledge is an embodied, and deeply affective process. Furthermore, because developing a critical voice was closely linked to being a successful performance indicator of becoming a successful student via the dominance of discourses of assessment, students should be given space to engage in activities to develop their confidence as writers, speakers and thinkers with independent, thoughtful and evidence based ideas and opinions. The following pedagogical activity is a way to pay attention to some of these difficult affective processes in the classroom.

Pedagogical Exercise 2: Reflecting on ‘Becoming’ a Critical Thinker

The purpose of the activity described below is to enable students to reflect on the difficulties inherent in becoming a ‘critical’ university student.

1. Students are asked to ‘freewrite’ (write continuously, as if a stream of consciousness) for 5 minutes on what they think it means to be a critical thinker in higher education. Reassure them that no-one will see this writing.

2. After brief feedback on how students found that process and offering space to share any insights, students are asked to write again (for 5 minutes) on what they feel some of the challenges in becoming a critical thinker in the ways they’ve described.

3. After brief feedback on how students found that process and offering space to share any insights, students are asked to pick out one of these challenges in becoming critical and write for another 5 minutes on ways they might overcome this. Encourage students to engage in regular reflective diary keeping about their learning as a way to build confidence in their academic identities.

4. In small groups, students are to discuss these challenges and solutions and to come up with top 3 tips to become a successful critical thinker in higher education to share with the class.

5. These tips should be written up and placed somewhere students can have access to them in future, such as the digital learning environment, preserving their ‘motivational’ message.

6. Conclude with a tutor-led talk about ways to develop academic confidence as critical thinkers and how these behaviours will be used throughout the course and in specific assessments. Follow up individual concerns around becoming critical in individual tutorials.

While there are no ‘neutral’ spaces within higher education, this pedagogical exercise helps to foster a space in that particular moment in which students could share their difficulties and concerns around becoming critical in a nominally supportive context. Furthermore, this opportunity to talk about academic confidence in ‘becoming’ critical is pedagogically important in recognising the embodied nature of doing critical thinking and how this intersects with notions of ‘difference’, as the following section explores.

Embodying the critical subject

Critical thinking is not undertaken by generic critical beings (Barnett, 1997) but critical bodies located in the particularities of their social characteristics and the multiple intersecting impacts of these differences upon their own experiences. Furthermore, what it means to embody a critical thinker, and for that critical body to be legitimised, is shaped through powerful, normative discourses about both critical knowledge and higher education students. For example, the following discussion with Kate describes some of the ways she saw a critical subject looking, speaking and behaving and how this intersected with who she thought she was (and who she might become) as a student.

He’s a huge reflector, he’ll always sit quietly, take everything in, churn it over, think about it and then he’ll come back to you, several days later when you’ve completely forgotten about the conversation.
and he’ll suddenly want to talk to you about it and he’s been thinking about it. And he’ll come out with more points and ask you what your feelings are on it. I think he’s naturally a critical thinker – if there is such a thing - I think if anyone is, it’s my Dad.

... My sister has noticed that my vocabulary has already changed; she said you already sound like a professional, coming out with more theories and ideas and questioning things... I don’t want to come across as the sister who is at university who is telling her what to do. [Laughs]. Know it all Kate again! (Kate, Interview)

In the first part of the quote, Kate describes her father as embodying the ideal characteristics of a critical thinker. This person she describes is something of a reflective, wise soul; a lone philosopher, seemingly unencumbered by other, domestic responsibilities as someone who simply sits and thinks. In his critical thinking, he also appears to engage deeply with knowledge but shows emotional detachment in doing so through demonstrating considerable patience, echoing masculinist ideas about rationality and objectivity. In the second part of the quote Kate talks about becoming a critical thinker through describing the reaction of her sister. Her account specifically echoes gendered notions of feminine submissiveness in her concern about not taking up too much space (or making too much noise). Moreover, these intersect with classed concerns as a mature student from a working-class background about whether her critical voice acted as an inappropriate challenge to existing individual and social norms, particularly being seen as someone who speaks out ‘above her station’.

There was a sense in which some bodies materialised more easily as ‘critical’ in Kate’s and other students’ minds than others, because of their historic position of dominance over structures of knowledge. For example, the notion of the masculine and rationality were interlinked, reflecting the historicised positioning of male reason versus female emotion inscribed in gendered bodies (Grosz, 1994). This is discussed by Thayer-Bacon (1998) who describes how the close relationship between rationality and masculinity has deeply affected our understanding of what a critical thinker looks like. In such a context, emotion (and potentially the feminine), collective thinking and uncertainty are devalued in comparison to rationality (and the masculine), individual reason and an assumed clarity of argumentation. Indeed, when I asked students how they became critical thinkers, the majority named the influence of an educated male figure. Of the ten who mentioned a person – seven said their Dad; one named a male theorist and one a male friend. Critical voices materialised themselves to certain bodies as a consequence of socially and discursively produced optics. The way these ideas then get (re)produced occurs through the circulation of such optics (Barad, 2007) reproducing our imaginaries of what a critical thinker is like along normative lines. Consequently, what a critical thinker ‘looks like’ appears to settle more easily around traditional ‘ideal’ student bodies – as theorised by Leathwood and O’Connell (2003). This makes becoming and feeling legitimate as a critical thinker in higher education potentially more problematic for marginalised students than those traditionally at home in the academy.

As a pedagogical consequence it is important to encourage the diverse student body to reimagine themselves as critical thinkers, as a political and epistemic challenge to dominant notions of how knowledge and criticality are embodied. Generating equity and inclusivity in critical thinking pedagogies involves interrogating how the critical thinker is understood and reproduced in and through higher education practices – and how this normative reproduction can be undone. The following pedagogical activity is a way to make visible some of the mechanisms by which critical voices becoming legitimated and to enhance students’ confidence in speaking, writing and thinking critically.

**Pedagogical Exercise 3: I am a critical thinker because...**
The purpose of the activity described below is to enable students to consider how they might have authority and ‘legitimacy’ to speak as critical thinkers.

1. List 2 or 3 contentious/debatable topics relevant to your subject on the board and ask students to think about (and then discuss in pairs) where their opinions/knowledge on these topics originated.
2. Feedback in pairs and then to the group, focusing on anything that particularly interested/surprised them.
3. In small groups ask students to reflect on the question of what makes them an authority on their subject and how this could be demonstrated in speaking and writing.
4. Feedback to the whole group, capturing the essence of the discussion.
5. Refer students to Twitter campaigns that ask people to state opinions on topics in less than 140 characters and have a photo taken in front of their slogan. Give out A3 paper and black markers and ask each student to complete the sentence ‘I am a critical thinker because...’ in less than 140 characters.
6. In turn, students are to stand up and state their 140 character claim with their slogan paper. In order to keep these for future reference, photos can be taken of the students with the slogans and uploaded to the digital learning environment or a blog.
7. Conclude with a discussion of the ethical importance of continually reflecting on their authority to speak as critical thinkers.

This pedagogical exercise enables students to think through what constitutes a critical voice and how such authorities get re(produced) over time and through specific optics of legitimisation. Crucially, it directly re-imagines all students as legitimate critical voices.

**Conclusion: a feminist re-thinking of pedagogies of critical thinking**

Retuning to a Baradian analysis, how critical thinking becomes gathered and boundaried through practices is reflected in the material conditions of possibility and impossibility of mattering: ‘they enact what matters and what is excluded from mattering’ (Barad, 2007, p.148). In everyday language, this suggests that what it means to be a critical thinker is not straightforward or transparent but instead reflects specific way(s) of seeing, and defining the boundaries of, critical thinking. Such a claim means that getting critical thinking ‘right’ (and challenging the notion of a ‘right’ kind of critical thinking in the first place) should therefore be understood as less of an exercise in students meeting critical learning objectives and more about interrogating the social-material-discursive conditions of possibly for becoming successful critical beings. Therefore if becoming a critical thinker is a contextual and embodied process it consequently requires pedagogical initiatives detailed above that make space to interrogate the boundaries and exclusions this produces. Firstly, this could be through questioning the historical processes shaping the legitimatisation of critical voices in specific (privileged) bodies. Secondly, it could be through recognising that criticality is a deeply collective process, separate from the notion of a single ‘knower’ and produced in and through pedagogical contexts. Finally pedagogical activities to develop critical thinkers could be directed at undoing the notion that academic critical thinking is a decontextualised and straightforward process, rather than a deeply affective and situated one.

While this pedagogical re-thinking is inherently imperfect given the limits of what we can know as similarly entangled critical practitioners, the very acceptance of uncertainty and the porous nature of the boundaries delineating what constitutes critical thinking is precisely the point. Indeed, this is arguably crucial at the specific socio-political crossroads we find ourselves at. For example, in the UK the Brexit vote revealed a distinct anti-intellectualism and preference for ‘headline’ knowledge rather than complexity (Grove, 2016) and therefore a need to challenge the persistent trend towards the reducing of (critical) learning in higher education to a technologised learning outcome. Furthermore, the gendered
description of the current UK prime minister Theresa May as a ‘bloody difficult woman’, as well as the sexism directed at US Presidential candidate Hilary Clinton still reveals that enacting a critical or educated voice settles more problematically around certain non-normative bodies (Barrat, 2016). Thus the primary purpose of a specifically feminist reconceptualising of criticality is to challenge notions of the neutrality of the critical being and consequently the possibility to decontextualise and technologise both learning and the learner in higher education. This is about continuing to undo these discourses through persisting with educational practices suggested above that generate possibilities for re-imagining knowledge and the world as being situated, in flux and open to change.

References


