'A SOURCE OF SANITY': THE ROLE OF SOCIAL SUPPORT FOR DOCTORAL CANDIDATES' BELONGING AND BECOMING

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ABSTRACT

Aim/Purpose	This paper investigates the role of social support in the PhD. Despite universities' efforts to provide a collegial PhD experience, candidates report isolation and loneliness in doctoral education – a factor contributing to attrition.
Background	Previous research (Mantai & Dowling, 2015) defined social support in four categories: moral, emotional, guiding and mentoring, companionship, and collegiality. Social support is facilitated in various formal and informal groupings. Socialisation into scholarly communities promotes researcher identities through a sense of belonging. Developing a strong researcher identity through social connections benefits a student's physical and emotional well-being, PhD progress, and investment in researcher careers.
Methodology	This paper is based on thematic analysis of focus groups and one-on-one interviews with 64 PhD candidates from two Australian metropolitan universities.
Contribution	Students' perspectives on social support during PhD study are largely missing in the literature, as more importance is placed on academic support. This paper provides rich empirical evidence to show that support afforded by candidates' personal, social, and professional relationships is critical in doctoral candidates' identity development.
Findings	First, investigating social support from the student perspective shows that it promotes students' researcher identity development, sense of belonging, and community. Second, the paper extends our understanding of what social support means as it examines this concept in the context of student diversity. This paper confirms social support in the PhD extends beyond the institutional higher degree research environment and includes outside support by family, friends as well as online communities.

Recommendations for Practitioners	Promote and improve support services, networking opportunities, and social connections within academia and beyond. Invest in understanding students' diverse backgrounds and individual circumstances as well as goals.
Recommendations for Researchers	Evaluate existing social support structures in place and identify social support needs of doctoral candidates at your particular institution.
Impact on Society	Institutions, governments, and individuals heavily invest in PhD degrees financially and psychologically. This research aims to improve outcomes for society by developing skilled and confident graduates.
Future Research	Future research ought to focus on the issues experienced by students of particular demographic backgrounds and on how to best support them.
Keywords	social support, relationships, PhD, doctoral experience, researcher development, student diversity, belonging

INTRODUCTION

The purpose of a PhD has shifted from apprenticing candidates for academic professions to developing confident and independent researchers (Neumann & Tan, 2011). Students rely on various forms of support and different people along the way. Previous research has identified, among other support types, particularly the nature of social support and who provides it (Mantai & Dowling, 2015). Social support was defined in four categories: moral, emotional, guiding and mentoring, companionship, and collegiality. These types of support are facilitated by social activities, mentoring relationships, friendships, giving advice, offering a listening ear, words of encouragement, etc. (see Mantai & Dowling, 2015, for details).

Various socialisation processes described by other research rely on particular, usually more formal, forms of social support with academic purpose to turn doctoral students into researchers (Gardner, 2008; Weidman, & Stein, 2003). At the core of the socialisation processes is a growing sense of belonging to a scholarly, academic, or research community. This sense of community is a well-established requirement for the doctoral student's scholarly development (Hopwood, 2010a, 2010b; Mantai, 2017; McAlpine & Amundsen, 2009).

A positive PhD experience does not exist without support and helpful relationships. Despite universities' efforts to provide a collegial PhD experience, candidates report isolation and loneliness in doctoral education. National surveys in Australia, such as the annual Postgraduate Research Experience Questionnaire (PREQ) by Graduate Careers Australia (GCA, 2014) and the National Research Student Survey (NRSS) by Edwards, Bexley, and Richardson (2011), ask students to rate 'collegiality', 'belonging' and 'community'. These categories record lower scores which signal a risk as the sense of community and belonging have previously been linked to students' well-being and academic performance (Peltonen, Vekkaila, Rautio, Haverinen, & Pyhältö, K. (2017).

Collegiality, belonging, and community are commonly described as social support which any PhD student would attest to needing to succeed. Students' perspectives of the function of social support, however, are largely missing. This paper investigates the nature and role of social support in the PhD, particularly in the development as a researchers, building on the author's and other research (Mantai, 2017; McAlpine, Jazvac-Martek, & Hopwood, 2009). Specifically, it provides rich empirical evidence based on focus groups and interviews with 64 students from two Australian universities to show that support afforded by candidates' personal, social, and professional relationships is critical in doctoral candidates' identity development. Social support comprises supportive relationships and networks that are or are perceived to be available and accessible in and outside the PhD research environment and that provide moral, emotional, guiding and mentoring, companionship, and collegiality support. Others have shown this kind of social support helps students feel accepted and part of a community – they feel a sense of belonging as opposed to being 'other' or feeling 'out of place' (Read, Archer, &

Leathwood, 2003). This paper conceptualises 'belonging' as a consequence of social and collaborative practices that lead to co-constructed identities (Ennals, Fortune, Williams, & D'Cruz, 2016). The paper argues social support provides candidates with a sense of competence and confidence as emerging researchers and as professionals more broadly, including diverse academic and non-academic identities. It argues candidates' sense of belonging to personal, social, and professional communities is critical for their becoming (i.e., development as researchers).

SOCIAL SUPPORT AND IDENTITY IN THE PHD

The PhD is frequently portrayed as an individualistic, lonely, and isolating journey. Doctoral education literature is filled with accounts of isolation and loneliness (Ali & Kohun, 2006; Carpenter, 2012; Coates & Edwards, 2009). At the same time, the literature on doctoral education also points to various institutional support on offer, e.g., research skill workshops (especially writing support), supervision, peer groups, or research seminars. These presumably aim to not only develop researcher skills but also enhance candidates' sense of community and belonging by bringing together peers, novice and senior researchers, and other university staff, academic and professional. Psychosocial support generated in such contexts 'cements the sense of self and belonging' and students' growth in graduate education (Posselt, 2018, p. 65). Social relations and networks within and outside academia have been shown to aid doctoral perseverance, combat isolation, and improve the PhD experience (Jairam & Kahl., 2012; Lahenius & Martinsuo, 2011; Lovitts, 2001; Sweitzer, 2009).

A variety of people support PhD candidates. Supervisors provide significant PhD support (Mantai & Dowling, 2015) despite contested primacy of single supervisors in the PhD (Boud & Lee, 2005; Buissink-Smith, Hart, & van der Meer, 2013). Supervisors do not act alone; team and group supervision practices are thriving despite the increased risk of disagreement and conflict (Green, 2005). Peers significantly complement supervisory relationships and can strengthen students' sense of belonging and 'a safe haven to test ideas and thinking' (Devenish et al., 2009, p. 62). Peer groups help develop learning skills, while also acting as places for encouragement and mutual empowerment (Boud & Lee, 2005; Conrad, 2003; Ryan, 2011; Yates, 2007). However, support received by fellow students and various others is not sufficiently recognised within the formal university discourse (Devenish et al., 2009), categorising it as an informal and possibly invisible PhD practice.
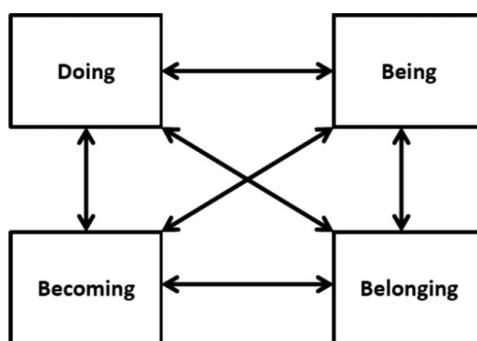
Figure 1: Dyads Between Doing, Being, Becoming and Belonging (Hitch et al., 2014)

It is widely recognised that PhD candidates rely on social support for their general well-being and skill development, but social support also plays a role in how students become members of research communities and develop identities as researchers. To assist in the socialisation of doctoral students into researchers, literature in this area calls for inclusive academic and research cultures, which seamlessly integrate novice researchers into established circles and networks (Pearson & Brew, 2002; Weidman & Stein, 2003). Ideally, Gardner (2008) claimed, PhD students should feel part of a collegial and collaborative research community as a starting point for any career they may pursue. Ennals et al. (2016) argued that collaborative practices help students assess their skills and status in comparison with others, understand what it takes to be a researcher, and be recognised as one by the group. As

such, researcher identities are socially co-constructed and constantly adjusted as students develop skills and knowledge. The concept of socially co-constructed identities supports Wilcock's interacting dimensions of occupation: *doing, being, becoming* and *belonging* (as cited in Hitch, Pépin, & Stagnitti, 2014 p. 247), as illustrated in Figure 1.

It is explained in the following example (Hitch et al, 2014, p. 247): "improvements in playing a sport changes a person's sense of being, which leads to new becoming through revised goals for performance and altered belonging as a more expert member of that sport's community". Being part of a research group and feeling a sense of belonging, hence, leads to an upgraded or more desirable status of researcher self.

Student agency is a central driver in the doctoral development journey and clearly relates to *being* and *doing* dimensions in Hitch et al.'s (2014) model. Research points to students actively seeking and creating their own support and sense of community (Hopwood, 2010a; McAlpine & Amundsen, 2009), on and off campus, face-to-face, and increasingly online (Bennett & Folley, 2014; Mewburn & Thomson, 2013). Candidates self-initiate ways of joining academic research groups and communities (Devenish et al., 2009; Hopwood, 2010b; Hopwood & Stocks, 2008; McAlpine & Amundsen, 2009). However, their agency is sometimes confined within institutional structures, hierarchies, and cultural boundaries, such as 'us-senior academics' and 'them-students'. Students may navigate various cultural transitions: professional vs academic cultures, varying cultures of different universities, home vs destination country.

The question this paper addresses is therefore: Why and what role does social support play in students' development as researchers, and specifically in regard to being, doing, belonging and becoming?

METHOD

Appropriate ethics approval was obtained for this research (Reference: 5201300597). The call for interview and focus group participants was circulated to doctoral students at two Australian metropolitan universities through research support staff and department administrators. Interested candidates could register their expression of interest (EOI) to participate and indicate their availability via an online form, providing their name, contact details, discipline, year, mode of study, as well as their status (domestic or international) at the time of enrolment. International students' home countries included Asian, European, Latin and North American countries. Participants received a $20 gift card for their time investment and provided written consent prior to participation.

Focus groups and individual interviews were conducted with 64 doctoral students from two Australian metropolitan research-intensive universities to elicit PhD students' support needs and experiences as well as their researcher development. Participants were a diverse mix of students (see Table 1) and were selected from the EOI list (n=113 from both universities collectively) to reflect the demographics of the PhD student population in Australia (Dobson 2012; Norton 2012) as far as possible. Gender and status figures at time of enrolment reflected the currently enrolled student cohort proportion in Australia (Dobson 2012; Norton 2012), whereas the disciplinary and gender figures did not.

All participants were at different stages of their PhD and enrolled in a Doctor of Philosophy degree, writing a traditional thesis or doing thesis by publication. One third of participants, all in their twenties, transitioned directly from Honours or Master studies into the PhD; the rest reported having had between one to 20+ years of professional and/or academic work experience before entering the PhD program. The discipline area (Humanities or Sciences) was determined by the researcher based on the department students indicated and following the traditional definition of HASS and STEM disciplines: HASS (Humanities, Arts and Social Sciences) and STEM (Science, Technology, Engineering and Mathematics). All names are pseudonyms. Students' characteristics were added to quotes to

provide more context, e.g., distinguishing between HASS and STEM as the structure and function of these PhDs can differ significantly.

Table 1. Participant characteristics

N=64	Enrolment status	Mode of study	Discipline	Gender	Age group
	43 domestic	53 full-time	42 HASS	45 female	36 in 20+
	21 international	11 part-time	22 STEM	19 male	16 in 30+
					12 in 40+

FOCUS GROUPS

Focus groups took between 50–70 minutes. They were conducted in groupings of students with at least one common group descriptor: all students in the group would optimally be international or domestic, part-time or full-time, Humanities or Sciences students. This ensured that students were able to relate and elaborate on each other's experiences (Cohen, Manion, & Morrison, 2007).

An ice-breaker activity opened each focus group by asking students to comment on four researcher-selected PhD comics ('*6/23/2007 Facebook', '10/28/1997 Calling Mum', '5/21/2004 Social',* and *'10/8/2002 You HAVE started writing'*, from phdcomics.com) in order to stimulate participants' thinking about social experiences in their PhDs. This initiated a 20-30-minute open conversation and exchange of experiences. An interactive post-it activity followed: participants were asked to note what social support they used, valued, and needed in their PhDs on individual coloured post-its and to roughly sort them in institutional 'inside', personal and non-PhD related 'outside', and 'online' support categories. (See Figure 2 for an example).

Figure 2. Examples of post-it activity

The three categories elicited a broad scope by stimulating students to consider various sources and locations of support beyond their department or university. Finally, a 15–20-minute open discussion followed on how their social support benefited them in the PhD process. Prompting questions drew out definitions and understanding of social support, its function and importance, and requests for concrete examples.

INTERVIEWS

One-on-one and face-to-face narrative interviews were conducted with 30 participants, of 40–70 minutes on average, which focused on their PhD experience, support, and perceived development as researchers. Face-to-face setting was important to build rapport and a more personal connection with the student on site and in an environment of their choosing. I prepared a protocol with open questions and prompts to roughly guide the conversation (Creswell, 2008) and keep me focused. In line with narrative inquiry and narrative interview methodology, I let participants lead the conversation and encouraged them to share their experience as honestly as they liked. I occasionally asked participants to elaborate in order to accurately capture what they meant. Narrative interviews are classified as qualitative interview techniques (Flick, 2009) and are in-depth interviews with specific features. They go beyond the question-answer scheme and give more control to the interviewee by minimising the interviewer's talking time, supporting the interviewee's style of language use, and positioning the interviewer as a listener rather than an interrogator (Bauer, 1996).

DATA ANALYSIS

Digital recordings of all group conversations and interviews were transcribed by a professional transcription service. All transcripts were checked and proofread upon receipt and imported into NVivo 10 for coding. The data analysis employed a constant comparative approach, a process integral to constructivist grounded theory methodology, which allows iterative grouping of similar ideas and themes (Charmaz, 2014; Thorne, 2000). More specifically, data analysis followed the six-phase thematic analysis approach (Braun & Clarke, 2006). The phases are the following: 1. Familiarising yourself with your data; 2. Generating initial codes; 3. Searching for themes; 4. Reviewing themes; 5. Defining and naming themes; 6. Producing the report. Coding for themes in phases 2–6 was facilitated in NVivo. Some initial themes were predetermined by the questions asked, e.g., definition and function of social support, importance of social support, and specific examples. Others emerged in re-reading and comparing across transcripts, e.g., tensions and conflicts, researcher identity development, student diversity. The narrative of becoming and belonging through social support emerged in the process of reviewing codes and themes.

FINDINGS AND DISCUSSION

SOCIAL SUPPORT IN THE PHD

For research participants, social support is generally associated with positive and helpful experiences, concerns the student as a whole person, and ranges from technical to emotional support. Participants used phrases such as 'source of sanity', 'human interaction', 'a warm environment', or 'a sense of community'. Social support emerges as something that makes candidates feel seen and heard, accepted, part of a group or network, and recognised as professionals and researchers in development. Ben (a young STEM student) explains: "It's more personal, it's more focused on feeling included, welcomed, reassured, valued." Lyn (a young HASS student) stresses the nurturing aspect of social support and adds the reciprocity effect, describing social support as a framework for her professional development.

> *The word 'support' itself means feeling nurtured [...] giving you not only guidance and backing, but also showing you what is to come, what to expect. And just having the people around you that care for you as well that you can lean on and they can lean on you. I see it as a give and a take. I have to show support to the*

people if I want them to give it back to me. I see it as a framework and a network in order to help me grow and belong and just be a researcher.

Stories of social support as defined by students communicate a sense of togetherness, membership, and community that feels and seems helpful in the PhD process. Anne (international STEM student) sums up: "It [social support] helped me to grow along as a researcher, so it's very important." Previous research describes these kind of PhD experiences as generating a supportive, collegial, and inclusive research environment that is likely to result in the student's active engagement and participation in the research culture (Wisker, Robinson, & Shacham, 2007; Yates, 2007). Forms of such social support often manifested in informal peer groups and more formal scholarly seminar groups, research online, national or international networks, etc. All of these rely on relationship-building which requires time and effort, especially if they are to be meaningful in one's scholarly development. And this is where support networks can present challenges or cause conflict.

CHALLENGES

Questions about social support prompted stories where support was missing or unhelpful. Responses revealed conflicts and tensions experienced by students that provide a deeper understanding of social support in the PhD, presented in five sub-themes below.

First, *social support can be perceived as distracting and disruptive.* Research shows peer groups as one form of a potentially supportive network, also, can be a source of conflict (Boud & Lee, 2005) despite the accepted belief that peer learning communities provide academic, social, and emotional support. Critical voices highlight issues that can arise in peer groups such as intimidation, anxiety, not fitting in, intolerant behavior, competition, and peer pressure (Boud & Lee, 2005; Conrad, 2003; Yates, 2007). To research participants' social support is helpful only when required, appropriate, and provided in a friendly and timely manner.

> *I have that social support outside that can either distract me from it [PhD] or I can just rant about something, and even if they don't really understand I still get a sense that they're on my side.* (Lyn, HASS)

Second, *peer groups can alleviate or increase negativity.* Whingeing (an informal term commonly used in Australia, meaning 'to complain persistently') with other PhD students to vent and talk off frustration and worries can be cleansing and cathartic, as students claim. Venting can indeed provide relief, help reframe difficult situations, and create a sense of 'we are in this together' (Mewburn, 2011). As Maya, a HASS student in her twenties, states: "Social support… sometimes it's just venting. Sometimes you just sort of talk. It means not feeling like you're the only one going through it. It's also knowing that you have people to turn to and who care." If, however, whingeing turns to continuous and repetitive co-rumination, participants say it can manifest negativity and prevailing discontentment (Mewburn, 2011).

> *If we are both in a bad place, we just bitch to one another and it creates this really negative atmosphere of how much we hate PhD's and it's really hard to get motivated.* (Nita, HASS, 20+)

> *I treat my days in actually as social days and I just come in with a view of, 'I'm going to go and see this person, I'm going to catch up with that person, have a bitch to her'. I treat my days on campus as social days.* (Yvonne, full-time HASS student, 40+)

Third, *to become an independent researcher means knowing when to ask for support.* Gaining confidence as a researcher takes time and experience (Jazvac-Martek, 2009) and requires acceptance of one's reliance on others' help, academic advice, and guidance, for instance. Related comments reflect feelings of imposter syndrome, a phenomenon often experienced in any new learning setting (Gardner & Holley, 2011). According to participants, feeling needy in day-to-day PhD life is common but can be demoralising to their self-esteem and threaten one's confidence as a doctoral student or a researcher. "You're always trying to put up the best version of yourself' says Julie, a young HASS student. Other students comment:

> *I've had days where I was so afraid to talk to anyone. I have that depression and anxiety. Just talking to her for five minutes made such a giant difference. Talking to people is so important and none of us do it very much. We're all very focused on looking like we know what we're doing and trying to get it right and worrying that other people are doing better.* (Chin, a young international STEM student)

> *I feel like there's this image that I must maintain with my supervisor. Originally, she thought I was good enough to get into the PhD, so I want to maintain that image, and not come across as being an idiot.* (Ines, domestic, HASS)

Fourth, *institutional support ideally complements personal support.* While equal support opportunities are generally available to all students on campus, students' personal needs and consequent use of institutional support differ significantly. Institutional support includes student skill support, well-being service, financial support, and opportunities to meet and connect with others, e.g., in workshops and seminars or supervision (Mantai & Dowling, 2015). In this study, students who have very little support from outside (i.e., family and friends) claim to rely more on inside institutional support than students who have a large supportive network outside. On the other hand, students point out that they rely on support from different areas; inside and outside support complement and supplement each other and ideally are aligned. As a young international HASS student, Ella, says: "I have this university life and this outside university life. So, everything goes into it [the PhD]."

Fifth, *participation in wider research culture is sometimes prohibited by time and access issues.* Some participants wish to be seen as members of the department and be involved in teaching, representative bodies, or departmental committees, for instance. Most participants express awareness that being part of the general research culture is necessary as it creates networking opportunities benefitting career development and future research collaborations. Jane, a mature full-time HASS student, says: "I miss out on networking opportunities. I'd love to be doing extra stuff and being more active in connecting with peers and stuff, but I can't. I just don't have the time. I might have to go part time." Most students state time is an issue and weigh up the benefits they get from investing time in non-PhD activities. For part-time candidates or those with considerable caring responsibilities, the problems are further aggravated, increasing their sense of exclusion and isolation (Neumann & Rodwell, 2009). Further, students' wider engagement is not always encouraged, easily accessible or available:

> *If it comes to the attention of their supervisor that they're spending time on things outside of their projects, it's a definite black mark, a lot of supervisors really don't want to see you doing much except for just focusing on the work [PhD].* (Ben, a young STEM student)

Students complain about time and energy wasted on paperwork, bureaucracy, politics, and permission-seeking (e.g., to participate in groups or activities). In relation to time, Ida (an international STEM student in her thirties) comments: "One thing I really don't like about the system here is that there is no time to fail at all, and I really feel like failing is a huge part of everything that you do." She deeply resents having little time available to explore and experiment with research methods, tools, etc. and, more importantly, to connect with people personally, socially, and professionally and to gain academic and professional skills and work experience.

> *I'm mostly involved because it's all networking, too, and collaboration. When you're done, I feel like you so rarely get a job that you just randomly go after - it's all about the people you know. […] I'm working on getting a position and getting to know the people and getting the skills that I'll need for that position, and so it's a lot of forward thinking. But the more people you can be involved with along the way, the better you'll end up when you're done.* (Ida)

The preceding quotes strongly echo critiques of increasing time pressures, a cost-benefit approach to work, and an individualistic culture in the academy that favours productivity above all (Müller, 2014; Trevitt & Perera, 2009) as well as mainstream conceptions of research success and productivity (Archer, 2008).

Counteracting the individualist culture imposed by neoliberal structures (Müller, 2014), candidates view connection with others in and outside academia as not only support for oneself, but as an obligation as a researcher whose mission is to contribute to society. An international HASS student in her twenties, Aisha, comments:

> *I think that it's obvious that being a PhD student is isolating because you need lots of time by yourself. But I think building a career as a researcher doesn't mean that you only have to be alone all your time, because how can you produce or do something for a society if you're not integrated in society and you're just in your small office?*

Aisha sees her participation and membership in the wider research community as necessary to not only prevent isolation but to instigate social change. Other participants in this study display great agency in seeking to connect and build meaningful relationships with fellow students, researchers, and people beyond academia to promote a sense of connection and contribution to a collaborative research culture. Ida, for instance, states:

> *I've actually put together a social Friday afternoon - we have drinks and it's just anybody who wants to come. I initiated that because I didn't know what anybody was doing.*

BECOMING AND BELONGING

The conflicts reported above point to experiences of exclusion from the academic community and lack of personal and professional connectedness. Students see the greatest value of support in being recognised and respected for the people they are and the researchers they are becoming (Mantai, 2017). Social support described here seems to strengthen one's sense of professional identity as a researcher and one's place in the research community. In contrast, misconceptions of students' personal identities cause tensions and disrupt one's sense of belonging and competence. Research participants express discontentment when viewed in a 'narrow' sense, i.e., doctoral students who want to pursue an academic career, as shown in the following focus group conversation:

> *There's an assumption that the system has made, that everyone is doing a PhD had no prior life. I, actually, had someone say to me, 'We're teaching you how to manage a budget.' My last job, I had a budget of $7.5 million. They've just got a very narrow view. It's almost like they think that somehow, we've popped from undergraduate, to masters, to post or whatever. (…) And, that we, as a cohort, who have life experience and to treat us like we don't have any idea or to, also, make the assumption that we're preparing for an academic life.* (Jane, a HASS student in her forties)

> *That's the changing face of postgraduate. That's the grief, there are a lot more people getting them (PhDs) and they're going into really diverse areas. And, there's a disconnect between what they [institutions] think we need as candidates.* (Sana, a part-time HASS student in her forties)

These quotes convey frustration with institutions not recognising students' diverse personal identities, i.e., previous experiences, diverse future career aspirations. The personal experience does not sit easily within the regulated doctoral education system (Gardner, 2008; Müller, 2014; Neumann & Tan, 2011), described as a 'disconnect' between individual needs and support available. This sentiment is aggravated for part-time students. One part-time distance student wished the university would have:

> *An understanding of my situation, recognition within the department or faculty, that I'm part of the university. (…) And recognition with the work (…) I don't feel necessarily that that's known about, I haven't finished my PhD like I'm only in that process but that just doesn't seem to have quite gelled within the institution. Maybe they might know who I am when I graduate.* (Cal, a part-time HASS student in his forties)

Candidates think institutions still define candidates as young and inexperienced learners wanting an academic career, contrasting with the fact that an average PhD candidate is 35 years old (GCA, 2014) and likely has professional work experience at PhD entry. The quotes above suggest this misconcep-

tion of doctoral student identities causes students struggles and stress and restricts rather than supports students.

Participants mention being involved in various activities not directly related to their PhD research, like teaching or tutoring, working on other research projects, and sitting on committees. PhD students comment on being conflicted by different roles, especially when they are employed as staff (at the same or a different institution) while being a PhD student. The student's self-concept is influenced by multiple role identities, for instance, between feeling competent and confident in the role of an academic employee and insecure and disconnected from the academic community in the PhD role (Colbeck, 2008). How others perceive and treat oneself adds to the complexity of one's status and self-concept (Tonso, 2006). In Hitch et al.'s (2014) model this is illustrated by the direct connection between being and becoming. Based on the comments presented above, it also affects students' motivation and agency. Ida, for instance, stopped organising social Friday night drinks, and Ben, a young STEM student, finds it difficult to view himself as an employee if he is not perceived and treated as such by others. Carina, too, (a HASS student in her thirties) feels unable to be part of the research community because of her student status.

> *Particularly as an employee while there are contract disputes going on [about research outputs, workload expectations], the employee side of me is seeing a shift and is becoming a little bit disillusioned and that's making the student side of me less enthusiastic about participating in the university as well, which affects my research. That affects my enthusiasm towards my research. It is that tension between being an employee and being staff and student at the same time.* (Ben)

> *Well, in some ways, I don't feel included in the department. PhD students or research students are a different group of people in the department. They don't see you as part of the team. It's very personal. Not everyone feels that. I just feel that, sometimes, they don't look and see you. I just have the sense that they are they and we are we. You're just two groups. There is a boundary.* (Carina)

This suggests candidates' professional identities, as an academic or researcher in development, are confirmed through inclusion in the academic community and alignment between how one perceives oneself, and how one is perceived by others (Tonso, 2006). Such a scenario creates direct links between being, becoming and belonging (Hitch et al., 2014). The quotes also show how experiences of academic work and academic employment conditions affect candidates' immediate PhD experience, motivation and future career aspirations.

Other participants echo the sentiment of exclusion and 'us and them'. Tensions seem to occur through an association of different rights, responsibilities, and privileges associated with 'student' vs 'academic' roles, as expressed by participants. Ben describes being a PhD student as "a bit of a weird no man's land" and comments: "It's funny because you're expected to work like you're an employee but without the pay, and you're expected to learn like a student but without the support [of a teacher]." While Ben refers to views of PhD students in academia, other students added that they find it hard to explain to people outside academia, such as landlords, housemates, and friends, that their PhD study is essentially a job, including a work routine, income (e.g., scholarship), and a workspace. Misconceptions of PhD students in academia and misunderstandings of PhD study outside academia are common experiences adding to students' stress and isolation.

STUDENT DIVERSITY

The quotes above express stories of exclusion and stress caused by misunderstood personal identities of candidates. Diverse student backgrounds, experiences, skills, circumstances, and personalities potentially aggravate conflicts and challenges experienced in the PhD (Winchester-Seeto et al., 2014). While the participant sample is not intended to be fully representative, differences were observed in female and male, part- and full-time, international and domestic, Humanities and Science students, and between mature and young students.

Each student group faces its own challenges. Young female students are cognisant of work- and family-balance issues that await them in the future should they follow academic careers. For two female participants in this study, this is a reason to build and maintain relationships with successful female academics and to prefer female to male supervisors as role models. The role model preference is an important observation to add to the challenges already widely recognised for women in academia, and especially STEM disciplines (Carter, Blumenstein, & Cook, 2013). Females with dependents are often disadvantaged, as they juggle study and care commitments (Hook, 2015), in the same time period and with the same support as male PhD candidates. However, child-caring responsibilities can also affect male students, like Omar (an international STEM student): "Now as a father and husband, I don't have any free time at home, so going to the office is kind of a shelter and escape from the routine." The challenge of keeping up personal and professional identities by utilising different physical spaces (e.g., home and campus), as a parent and researcher, is discussed in detail elsewhere (Dowling & Mantai, 2016).

Part-time students typically juggle full-time work with PhD and caring responsibilities. They may also have different career objectives (Deem & Brehony, 2000). Hence, they use less PhD support offered on campus during business hours. Previous research found part-time students tend to be particularly isolated from the student community and struggle to feel part of any student or academic cultures (Deem & Brehony, 2000). Students with conflicting commitments (part or full-time) are conscious of time constraints and engage less in social PhD activities on campus. Instead they place higher value on technical support and academic advice rather than socialising and networking with fellow students and academic community overall. Mature students also express different concerns from young students. Due to extensive work and life experience they may be expected to be more independent than young students but can find themselves as needy of support as young students, e.g., with technical issues.

The international PhD student experience is reported by an extensive body of literature, which largely confirms that international students' experiences are intensified and often complicated through communication barriers and lack of a close support network (Winchester-Seeto et al., 2014). Apart from language barriers, which noticeably hinder non-English speakers' ability to form relationships and friendships with others, cultural differences add to the challenges.

> *I share the office with other seven students and I have noticed that if you aren't a New Zealander or if you aren't an Australian, they just disappear — they don't socialise with internationals. You have to build your community with internationals because it seems that the nationals or the locals are not that interested.* (Aisha)

International students may struggle with connecting to others, understanding new customs and social norms, and simultaneously fitting in the new culture and academia, as Esther (an international HASS student in her thirties) admits: "In the beginning I found it really difficult to adapt to everything at once." Even if language is not an issue, loss of the social support network causes adjustment difficulties.

> *When I see people from my department, I never know if I should I say hi and ask them how they're doing or not, because I feel that they don't even know me. In the beginning when I came, I asked my supervisor, 'Okay, I think I'll go from door to door and introduce myself and say, Hi I'm the new PhD student.' He said we don't really do it. So I thought, 'Okay, from now on that's it then, I won't do it.'* (Esther)

> *At home, we're all based at a university and we're all lecturers. So, we're all working there, we're all colleagues and we don't have courses to attend or anything. So it's not like being a grad school student. [...] Here, I feel like a student and I really like it but at home I don't feel like a student. I feel like a teacher at university and on the side, I have to do my PhD.* (Ella)

Ella is a young international HASS student and has just moved to spend a year of her PhD study in Australia. Although she enjoys the benefits of 'being a student' for the time being, she experiences a

loss of status and feels 'demoted' from teacher to student level in Australia compared to the doctoral education system in her home country. Her sense of belonging to an academic community and her sense of independence are disrupted. Kehm (2006, p. 69) claims that PhD students in Europe (e.g., in Scandinavia and The Netherlands) are mostly seen as, and prefer to be called, 'early career researchers', and the doctoral student is regarded as an employee (as a junior staff member) of the university with 'duties, rights and a regular salary'. Ella's experience points to the impact one's officially assigned status has on one's internal sense of self shaped by previous identities. Further, student diversity resembles *being* and *doing* dimensions in Hitch et al.'s (2014) model: who the student is aside from being a student (e.g., academic, employee, immigrant) and what the student does (e.g., teaching, introducing oneself to new colleagues). Both serve to identify where and how they belong as well as assess where they are on their development journey.

CONCLUSION

Many doctoral students do not experience a supportive PhD environment, which negatively impacts academic performance, progression and student well-being (Peltonen et al., 2017). A sense of collegiality and community significantly improves the PhD experience (Wisker et al, 2007). This paper deepens our appreciation of social support by explaining why and how social support helps students in not only moving forward in the PhD but also developing as researchers. In this paper, 64 candidates from focus groups and interviews at two Australian metropolitan universities reported on factors that enable and disrupt their sense of becoming researchers. These reflect Hitch et al.'s (2014) occupation dimensions of *being* and *doing*, *belonging* and *becoming*. Social support as multi-faceted and embodied in various forms, e.g., research networks and collaborations, friendships, and seminar groups (Mantai & Dowling, 2015) as it is, interconnects all four dimensions in this model. Ultimately, social support empowers the student and helps develop a sense of becoming a researcher and being recognised as one (Mantai, 2017; Posselt, 2018).

This paper presents experiences of PhD candidates who feel their diverse identities and actions (*being* and *doing*) do not neatly fit into universities' norms; hence, they are inadequately recognised, and their needs inadequately supported. This results in students feeling unsupported and disconnected, preventing a sense of belonging and becoming a researcher, which is likely to result in lesser investment in PhD study and researcher careers (Weidman & Stein, 2003). This study partially represents a typical Australian PhD cohort, and points to difficulties candidates experience in developing as a researcher (*becoming*) and being perceived as a researcher by oneself and others. The factors *being, doing* and *belonging* constitute the assemblage (*becoming*) of oneself as a researcher, and if one or more of these are unseen, missed, or misconceived, the researcher identity is troubled. This paper presents rich narratives that particularly emphasise the relationship between *belonging-becoming* dimensions. The sense of *belonging* and *becoming* is particularly difficult to achieve with increasing diversity of candidates (e.g., female mature students, international single parent students). As Australia's doctoral cohort is becoming more and more diversified, future research ought to focus on the issues experienced by students of particular demographic backgrounds, and how to best support them, if Australia continues to encourage PhD enrolments (Universities Australia, 2013).

This paper hopes to be useful reading for PhD students and supervisors alike. It hopes to stimulate reflection on students' social support situation and needs and provide guidance in navigating the process of becoming researchers, academics, and professionals. The overall call to action and intention of this research is certainly to refocus institutional PhD support and resources on the student and their development – the researcher – rather than PhD thesis and research alone.

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