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Mentorship in computer ethics
ETHICOMP as a "community mentor" for doctoral and early career researchers

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Abstract

Purpose – This paper aims to introduce the concept of ETHICOMP as "community mentor" – the role that the ETHICOMP conference plays outside the standard conference fare, in which it nurtures and supports up-and-coming researchers in the field of computer ethics.

Design/methodology/approach – This paper uses an auto-ethnographic methodology to reflexively explore the author's career from PhD student to early career researcher spanning the years 2005-2013, and how the ETHICOMP community has played a significant role as a mentor in her life. The literature on mentorship is discussed, particularly focussing on the importance of mentorship for women in philosophy-related academic careers, and criteria for successful mentorship are measured against the ETHICOMP "community mentorship". Additionally, some key philosophical concepts are introduced and reflected upon.

Findings – The paper produces recommendations for other philosophical communities wishing to grow their mentorship capabilities through communities around conferences.

Originality/value – This paper sheds new light on the concepts of mentorship and the practical application of mentorship within an academic community. It also provides an account of the value of the ETHICOMP conference series that is beyond the usual academic output.

Keywords Gender, Community, Diversity, Empathy, Conferences, Mentorship

Paper type Research paper

1. Introduction

It was only a year into my Computer Science degree at the University of Sydney that I started my first part-time job in the industry, back in the very late 1990s. I was a Linux Systems Administrator for a large recording company, and for a measly amount of pay, I was expected to do most help-desk tasks (not at all involving Linux) and manage a small Linux server that hosted the company's Intranet site. Within that Intranet was a large amount of very important information, including sensitive financial records and personal information of various stars the company had signed to them. Here I was, a lowly university student, in charge of some potentially very valuable or damaging information. It was this realisation that led me to an interest in computer ethics, which I pursued through studying a major in History and Philosophy of Science.

I had no idea that was what I was doing for a long time. I called myself a sociologist and a philosopher for the more advanced stages of my university days, until I won an award to study at the Centre for Applied Philosophy and Public Ethics (CAPPE) at Charles Sturt University in the area of Computer Ethics, under the auspices of Professor John Weckert. Within the first couple of weeks of starting my degree programme, I was whisked away to my very first ETHICOMP, taking the place of an ill CAPPE member. I had no paper to present, I had no idea what I was doing for my PhD and I knew nobody there. It was ETHICOMP (2005), in Linköping, Sweden.

ETHICOMP is more than just another conference. Its community is sometimes called a "family", and in many ways, it really is. One of the most striking things about the conference, unlike other conferences I have been to, is that the top thinkers and researchers who come to ETHICOMP are extremely supportive of terrified new PhD students. For me, in Linköping, it was not until well after the fact that I found that my very interesting dinner partners were all senior figures in the field – people who went on to inspire me greatly in my own studies and aspirations.

In this paper, I introduce the concept of ETHICOMP as "community mentor" – the role that the ETHICOMP conference plays outside the standard conference fare in which it nurtures and supports up-and-coming researchers in the field of Computer Ethics. It is not any one or two particular members of the ETHICOMP community that play a particular mentor role, but the community itself – through its inclusivity, the knowledge that the conference is a "safe space" to test ideas, and other, less formal aspects of the conference that make it welcoming and supportive.

Here I explore the nature of this "community mentor" role by investigating the literature surrounding mentorship, particularly in philosophy, including some definitions of mentorship, the requirements of successful mentorship, particularly at an early career stage, and the particular nature of mentorship in the academy. I then use my own progression from new PhD student to Lecturer at the Centre for Computing and Social Responsibility (CCSR) as the basis for a reflective auto-ethnographic investigation (Ellis *et al.*, 2011) into the effect that ETHICOMP has had on at least one member of the community. This will take the form of following the timelines of the ETHICOMP conference series and my participation in the conferences, and my career progression from 2005 to 2013, reflecting on the community's mentorship in the process. Naturally, this will be a particularly anecdotal perspective, and will not be rigorous, but by investigating the issues from a personal perspective, I hope to capture and describe the unique role that ETHICOMP plays in the computer ethics community and, in doing so, join in the celebration of the past 20 years of the conference series. Furthermore, I aim to provide organisers of conferences in similar areas of philosophy and applied philosophy with an account of how conferences can be supportive, positive experiences for students and early career researchers through facilitating mentorship, and to outline some recommendations in line with this.

2. The nature of mentorship

In this section, I will explore the mentorship relationship and some of the literature that defines and illustrates it. I do not attempt to be exhaustive in this discussion, but to give some theoretical background to the discussion that will make up the majority of this paper. It is important to not only establish the concepts that will be discussed, but to allow for some critique of existing ideas and definitions of successful mentorship.

Finally, in this section, I will determine a few practical criteria for successful mentorship in the academy, and outline my methodology for then discussing these in the light of my own experiences in the following sections.

2.1 What is a mentor?
Mentors and mentorship are concepts that have been with us since Ancient Greece, named for the man (and later, Athena disguised as a man) put in charge of Odysseus's son, Telemachus, by Odysseus, while the latter was away in the Trojan War. When Athena took the guise of Mentor, she guides Telemachus to discover what happened to his father. This relationship became the basis for the idea of an experienced person guiding a less-experienced person through aspects of life, and particularly through the latter person's career (Stalker, 1994; Matthews, 2003). Over time, there has been a shift from age-dependent definitions (traditionally, older members of an organisation looking after younger members) to more positional definitions (usually, members with more experience than newer members, regardless of age). This change has been accompanied by a similar change in definition, which requires the mentee to play an active role in the relationship to gain as much benefit as possible from it (Matthews, 2003). Kram (1985) identified the distinct difference between *instrumental* and *psychosocial* guidance; other scholars have followed suit and determined the specific differences between practical and emotional guidance (Tenenbaum *et al.*, 2001), and *networking* guidance has also been found to be a plausible third type. Mentoring also has been generally found to benefit not just the mentee but the mentor and organisation as a whole (Tenenbaum *et al.*, 2001).

2.2 Mentorship in the academy
In the academy, it has long been assumed that mentorship is important to the success of the doctoral/post-graduate ("graduate" in the USA) student (Stalker, 1994), and that mentors are often a supervisor of the student – which is not actually always the case, as most evidence is anecdotal at best, and often cherry-picked to support assumptions, but mentorship can particularly help both student productivity (*instrumental* guidance) and satisfaction (*psychosocial* guidance) (Tenenbaum *et al.*, 2001). These improvements would, no doubt, carry across into later stages in academia, given that they are the natural extension of studentship. Indeed, although potentially problematic, these results do reflect the status quo – that mentorship is, at the very least, socially considered to be extremely important for the development of the mentee.

Individual definitions of what a mentor is vary greatly, but almost all involve the idea of a person with experience guiding a person without, with the *guiding* process being a complex and subtle mechanism that can be hard to pin down. With an academic's main focus in their job being research, teaching and administration, it would naturally be appropriate to focus the mentoring process on these three aspects with reference to the mentee's career stage (Matthews, 2003; Hardwick, 2005). Mentoring is also a "mindset", with forced mentoring very unlikely to succeed (Hardwick, 2005). Hardwick also encourages both formal and informal mentorship, by encouraging junior academics to seek out good relationships with others before resorting to official channels – this is particularly important, given the situation of ETHICOMP and its attendees.

Women have a different experience of mentorship in the academy from men. While some literature has identified the issues of men mentoring women in academic arenas,

particularly that such relationships are linked to traditional gender norms and that mentors are more likely to pick mentees who share similar values to them, being "same" while also being "other" (Stalker, 1994), the mainstream mentorship literature only acknowledges these issues in passing. Given the academy itself is still a highly patriarchal system (although efforts in the UK, particularly Athena (2014), are starting to address equality between male and female academic staff), the literature tends to operate within this particular sphere and rarely addresses the broader issues of women's situations within academia. Valian (2005) suggests that the problem is due to "gender schemas", built-in pre-conceptions about capabilities of each gender. "Small imbalances [biases] add up to disadvantage women" (Valian, 2005, p. 204), and these occur unintentionally, despite our "genuinely held egalitarian and meritocratic beliefs and ideals". Although the issue of women in academia is outside the scope of this paper (though I will address particular issues in the field of philosophy below), it is important to acknowledge that there is an equality gap here – not just between men and women, but between women of different backgrounds and groups (Stalker, 1994) – and that this gap is not trivial to bridge. Women benefit particularly from mentorship (Hardwick, 2005), and women in senior positions are more likely to mentor other women (Stalker, 1994). Stalker also rightly suggests that these relationships between women can be used to actively transform the academy by challenging stereotypes and resisting the incumbent patriarchal culture of academia. However, Matthews (2003) points out that the lack of higher-level female staff can mean that younger women may miss out on the particular experience of a female academic, which could mean missing out on the richer experience detailed by Stalker (1994). As I am a woman in academia, it is important to establish the particular experience of women mentors and mentees, as this casts a particular light on the experiences I detail below.

2.3 Mentorship in philosophy

In philosophy, there is a well-acknowledged lack of women academics (Antony and Cudd, 2012; Crouch, 2012), with some focus on improving representation of women and support in the profession for early career women in philosophy. Crouch (2012, p. 221) in particular notes that for philosophers, the equality gap is made more difficult by the nature of the subject, with concepts such as "diversity" troublesome to define. However, the shift of the university towards a neoliberal corporation, Crouch accepts that such goals as increasing diversity are "only valuable if it is necessary" to the corporate goals, and that many of these goals are out of alignment or may conflict with current areas of female strength in philosophy (such as interdisciplinary work, feminist philosophy). In this case, mentorship is perfectly positioned to be an inspiring force amongst women to take on Stalker's (1994) challenge to transform the academy. Specific activities related to mentorship in philosophy are also being trialled: Antony and Cudd (2012) described a workshop mentoring project with senior women recruited to mentor small groups of women and present panels. One of the particularly interesting aspects of the feedback for this venture was that although the workshop was extremely helpful to the women involved, one of the less successful aspects was the ability for the women to work with multiple mentors – as the women only had one mentor, they did not get time to work with the other mentors. "This situation could be improved with a greater amount of time for the workshop in which mentees could meet with other mentors" (Antony and Cudd, 2012, p. 465). The workshop was also of more benefit to those who already had

tenure-track positions (in the UK, the equivalent would be a "permanent position") because there was the assumption that the academics involved already had a job. The fact that such a workshop was successful for the women is a good sign that mentorship does not have to be one-to-one to be successful, and that one-off encounters with inspiring people (and particularly women, for other women) can act as a mentorship opportunity. Antony and Cudd have run subsequent successful workshops for pre-tenure academics[1] with the justification being, simply, "good mentoring has been found to be important for success in academia, and women do not receive as much of it as men do".

Little has been written on the use of academic conferences as mentorship opportunities, apart from suggestions for networking (Hardwick, 2005; Stalker, 1994; Tenenbaum *et al.*, 2001), this area has been little explored.

2.4 Important practical characteristics of mentorship

From this scope-setting, but not exhaustive, literature search, some important characteristics of successful mentorship in academia can be determined:

- that the mentorship relationship is gender-sensitive – in particular that women have the opportunity to be mentored by other women for their experience to challenge the male-dominated academic status quo;
- that the mentor and mentee have a good relationship and that mentorship is not forced upon them;
- that the mentorship follows the career goals and aspirations of the mentee and is relevant and inspiring to these; and
- that mentor relationships are able to grow naturally through both formal and informal methods of establishment.

I would also like to propose another criterion that is not explicitly mentioned above, but which builds on the findings of Antony and Cudd (2012), and the call from Crouch (2012) for diversity in philosophy:

- That, where possible, mentees have the opportunity to have multiple, diverse mentor relationships.

Multiple, diverse mentor relationships can allow for pressure to be taken off busy academics, can provide different perspectives and opinions, can allow for a diverse range of career-types and goals to be explored and supported and can provide greater networks than a single mentor might be able to provide (such as the feedback in Antony and Cudd, 2012).

3. Methodology

Having discussed the literature on mentorship, in the next section, I will describe how ETHICOMP as a community has been able to fulfil the above-mentioned requirements in my personal experience, by facilitating multiple diverse mentor relationships and forging strong relationships between junior and senior members of an academic community. This will be in the form of an auto-ethnography, which consists of "aesthetic and evocative thick descriptions of personal and interpersonal experience" (Ellis *et al.*, 2011, p. 277), from a reflective, personal perspective, which will be linked

with the literature in the final section. Auto-ethnography can provide authenticity and can "trigger ideas and connections with the researcher's experience" (McBride, 2008). I acknowledge that this will be, naturally, not a process able to be generalised in the traditional sense of the word but, in the auto-ethnographic tradition, can be tested "by readers as they determine if a story speaks to them about their experience or about lives of others they know" (McBride, 2008). Linking this back to the literature on mentorship will also help to determine whether my experiences fit within an established norm which *has* been researched more traditionally, and then exploring some philosophical concepts will add another dimension to the discussion. The "conversation" desired by Ellis *et al.* (2011) that this paper started was continued at ETHICOMP Paris, at which this paper was presented. The philosophical concepts discussed later in this paper arose from that conversation and feedback, and are an important aspect of this paper.

I have taken some liberties with naming particular people in this auto-ethnography. All told, there ended up being a network of around ten regular attendees of ETHICOMP that I met up with and would (unintentionally) pursue mentor/mentee-like relationships with. I have named only a couple of these, those whom either I co-wrote papers with were involved in the running of ETHICOMP, or of whom I asked permission beforehand. The rest I have kept anonymous. I hope all involved will forgive me for any inaccuracies, as I did not consider that I might be writing such a paper back in 2005 (or subsequent years) or I might have kept more accurate notes.

4. ETHICOMP as community mentor

ETHICOMP is a series of conferences that focusses on ethics in computing in a general sense. As can be surmised from the title of this special issue, the conference series has been going for around 20 years. The conferences are held roughly every 12-18 months and are held in diverse places across Europe and the world (although Europe is the predominant venue). The attendees range from students through to the luminaries of the computer ethics world from all corners of the globe, but participants particularly hail from Europe, the USA, Japan and Australia. Papers are accepted by peer-reviewed abstract, and the conference is relatively accepting of papers with a high acceptance rate. This allows for a supportive atmosphere to develop initially, as there is not fierce competition to be accepted at the conference (unlike in other computing and computer science conferences where acceptance rates may be below 10 per cent). Despite this, the papers are usually of good quality and many go on to be published outside of the conference proceedings.

The conferences, prior to the formation of the Steering Committee, were largely organised by Simon Rogerson and Terry Bynam, who retired from running the conferences after the Denmark conference in 2013. Since then, a committee of organisers including the local host, the track chairs, the programme chair and the conference chair along with a general organisational committee with terms of three years have been moving the conference series forward.

In this section, I will discuss my experiences at ETHICOMP and how the conference established itself as a community mechanism for mentorship for me over the past nine years. I will describe the relationships with the community that were developed and how these aligned with my career progression from student to post-doctoral and finally to a permanent member of staff at De Montfort University, the university that established the conference. I will discuss this progression in the light of the literature and

characteristics of mentorship introduced in the previous section, with the aim to show how conference communities can be a set of diverse mentorship relationships, even if the relationships themselves are not necessarily particularly close.

4.1 The early years – doctoral student

The Linköping ETHICOMP (2005) was quite an experience. I had never been to an academic conference before and was extremely excited by the tracks of papers – all of which were relevant to my interests. It was this alignment of interests that made it very easy to fall into discussion with others during and after the talks. My supervisor had told me of a couple of people that I should introduce myself to, and I dutifully did – one of these was Simon Rogerson, the then-organiser of the conference. He invited me to join him with some of the other attendees to drinks on the first evening, all of whom accepted me readily into the fold and made me feel extremely welcome. Throughout the day, I found I had people I could talk to about not only my own research (which was still fairly nebulous at that point), but about all aspects of academia and the PhD process I was undertaking. I met people from all around the world, with different wealth of experiences and ideas.

Not only were there opportunities to network with the attendees that were readily advertised to the attendees – often what happened was that everyone congregated at a particular bar or hotel lobby and went to eat with whoever was around – but there were more formal opportunities for PhD students to establish themselves in the conference community. Student papers were scattered about the programme (although, as mentioned previously, none of mine), and other students and established members of the field attended. Questions were asked and constructive criticism given in an atmosphere that was extremely welcoming and friendly. It was at this stage that I realised how supportive the community was of new members – I could tell that the students were extremely nervous about giving talks on their research to the established researchers (as I found myself later on as well!), yet they were treated as equals and with a lot of respect. For me, this was unexpected – I had been to philosophy seminars at my undergraduate university and seen some extremely ugly criticism being levelled at both established researchers and doctoral students, and had expected a similar level of discussion here. This was not the case, and made the community's atmosphere all the better for it.

Towards the end of the 2005 ETHICOMP, I approached Simon Rogerson, to whom I had introduced myself early on in the conference, and discussed how welcome I'd felt and how much I had enjoyed myself at the conference. I suggested that perhaps, it might be nice to have a dedicated "track" of PhD student papers that did not run up against "famous" researchers – one paper I had been to only had a couple of attendees because one of the bigger names had one on at the same time. Simon thought this was a good idea, and announced at the end of that conference that there would be more support given to PhD students in the ETHICOMPs to come. It felt very validating to be not only taken seriously, but to have my suggestions acted upon so quickly. This empowerment was something I took back with me to Australia, and along with the rich programme of talks and events, it inspired me in my studies. (The single track idea ended up not working very well, as it was found that it was better for students to be integrated with the conference in order for more attendees to be there – it was reverted in subsequent years with more eye to when students were up against "big names".) I kept up contact with a couple of researchers that I had met – many of whom I had come to know better

in the pubs and bars of Linköping – and I maintain contact with them even now, even though some of them have never been to another ETHICOMP that I have been at since. One such researcher was Jean Camp, one of my surprise senior dinner partners, whom I have only met once since – recently at a video game convention in Boston, completely unrelated to ETHICOMP. Our distant Facebook relationship kept that link alive, and we were able to relate back to our time in Linköping drinking pear cider and talking about security. Simon Rogerson and Ben Fairweather were others I kept in vague contact with – I saw them at a couple of ETHICOMPs afterwards, and now work at the CCSR – but the discussions we had over a beer in the pub in Linköping were what inspired me to aspire to gaining a position at the CCSR (a very far off pipe dream at the time!).

The discussion with Simon about the role of PhD students in the ETHICOMP community was not just left in Linköping – at Meiji University's Tokyo ETHICOMP (2007), it was something that was attempted as best as the organisers could. Ironically, my paper on informed consent in information and communications technology (2007) was one that was not able to fit in with this – it was scheduled alongside a talk by Terry Bynum, a senior member and organiser of ETHICOMP. I distinctly recall only having a couple of people coming to my talk – most of whom said that they were interested in seeing someone new rather than someone they had seen many times before, which was heartening.

ETHICOMP Tokyo was a slightly different beast from the previous ETHICOMPs. Usually, the series was hosted in Europe – this was the first conference in the series to be hosted outside the Continent. Many of the attendees at the previous conference could not come all the way to Japan, unfortunately, but those who did were treated to a wonderful conference with traditional Japanese entertainment and the highest honours. This lovely backdrop and a smaller number of the "usual suspects" was bolstered by a larger-than-usual number of delegates from Asia and Australia (myself included). It was lucky at the time that ETHICOMP was in Japan – my Centre would not have sent me to Europe again, as the airfares were too high from Australia. Once again, it was a space for reconnecting and making new connections – networking with a group of people who could play the role of mentor – but with multiple inputs, so I could weigh suggestions well. At that stage in my career, I was solidly into my PhD and was thinking of things I could do next. Did I want to go to the USA for post-doctoral positions? Or did I want to go to Europe? (Or, possibly, Japan?) The culture in academia in Australia is that you ought to go elsewhere for experience before coming back to Australia (if you decide to at all). I knew that I wanted to continue in academia but I was not sure how or where. Various attendees with extensive experience in the European and American academic job market gave me invaluable suggestions and tips for how to approach the prospect, and through several long discussions with a couple of different academics from different countries I was convinced that Europe was the place for me – the American market was too tightly tied with the American university system and had requirements that I would find it hard to meet – not only that but most of the computer ethics research that was being done in the USA was the output of sole researchers, not centres, like there existed in Europe. Without this extensive insider knowledge from ETHICOMP attendees, I would have had an extremely difficult time trying to "crack" either of these markets as an outsider from a relatively small country.

One particularly touching discussion I had at ETHICOMP Tokyo was with a woman who worked at a Japanese university who was doing her PhD and teaching. She confided

in me that it was extremely difficult for Japanese women to go into academia because of the cultural expectations of both the academy and Japanese culture. Women in Japan were expected to give up their career when they married (with a few exceptions) and to concentrate on the family. The culture in the universities, she said, was similar – women were either pressured indirectly through being asked when they were likely to marry, have babies, etc., or were deliberately not promoted because there was the expectation that it would not be worth the trouble, given the woman would be going to marry, have babies, etc. soon. She was looking to go overseas to continue her work and appreciated the discussions she was having with other attendees at ETHICOMP to know that there were potentially better prospects outside of Japan for female academics.

ETHICOMP Tokyo was able to support me at my later PhD career stage by not only helping me to establish contacts for potential jobs later but also to discuss the role of women in the academy, to provide different perspectives on different countries and their suitability for my career aspirations and to allow me to talk through potential strategies and methods for applying for jobs.

4.2 The not-quite-so-early years – post-doctoral researcher

Because of my situation in Australia – I was writing up my PhD and, as mentioned previously, the airfares to Europe were too much for my Centre to cover again – I missed the ETHICOMP in Mantua, Italy, in 2008. My next ETHICOMP was in Tarragona, Spain, in 2010, after I had started working in Belgium at FUNDP Namur as a post-doctoral researcher (I had taken on the suggestions of my ETHICOMP mentors and been successful at gaining a position in Europe). There I was presenting the work that I had been doing with Philippe Goujon as part of the EGAIS and ETICA projects that I was working on at the time (Goujon and Flick 2010). It was at this time that I was on the first steps of my career in academia, and I received many helpful suggestions from both old friends and new, particularly about living in a country where I did not speak the language, and working on European-funded projects. One of the women I met there went on to become a longstanding mentor of mine, and was very good at helping me to understand the European Union projects and expectations from the Commission (as she was at one point a Project Officer). It was also difficult being so far from home, and the ETHICOMP community was starting to feel like another "family" to me, a set of familiar faces that I could relax around and enjoy the company of, as well as receive good advice and suggestions.

Although I had to leave Tarragona early, due to budget constraints, most of the other attendees stayed on, and many were caught in the eruptions of Eyjafjallajökull which grounded planes across Europe in mid-April. This allowed for many of the attendees to not only continue with their discussions around the conference theme but to come together and share experiences in a crisis – an ETHICOMP that is well-remembered now!

Tarragona had been a reminder for me that even though I was no longer a PhD student, I could still benefit from the good advice and friendship of the ETHICOMP "family". I started to meet new students as well and began the process for them to be integrated into the community – introducing them to people, giving them advice and sharing my experiences. At this point, I was not only being mentored by ETHICOMP members but starting on the path to being a mentor myself to the newer members.

At ETHICOMP (2011), in Sheffield, UK, I had moved from Belgium to the UK, to work at Middlesex University with Penny Duquenoy on a UK-funded project on online child protection Flick and Duquenoy, 2011. This move had been personally very difficult, and I had turned to many ETHICOMP "usual suspects" in the intervening time after Tarragona, receiving a lot of encouragement and support – when the advertisement came out for the job I ultimately was successful in, no fewer than five ETHICOMP regulars forwarded it explicitly to me with the suggestion that I apply for the job, and with a few offers of acting as references. At the time, I was extremely grateful for this assistance, and was ultimately successful. Sheffield, thus, was a chance for me to express my appreciation and thank them personally. I also gave two papers based on the research I was carrying out into online child protection (Flick and Duquenoy, 2011; Flick et al., 2011), which were well received. I also continued to meet new people, both established researchers and academics and earlier stage members of the ETHICOMP community. Some of the students I met asked my advice on furthering their own careers – much as I had back four years prior. My own contract at Middlesex was coming to an end, however, so I continued to ask about potential openings with other ETHICOMP attendees. Simon Rogerson mentioned that there would be a job at De Montfort University advertised soon after the end of the conference, and that I ought to apply for it. Bernd Stahl, with whom I'd worked on the ETICA project (and met at previous ETHICOMPs), and who had also played a significant role in my academic life by examining my PhD and providing other assistance and guidance, also suggested it.

At the Sheffield conference, I ensured I not only thanked those who had helped me earlier but also that I played my part giving back to the community in terms of experience and mentorship to earlier career students and researchers. In the closing talk, Simon Rogerson and Terry Bynum, who had been running ETHICOMP since its inception, announced they would be retiring from running the conference, and that Bernd Stahl, the director of the CCSR, would be taking over the running of it, with a steering committee. I do not recall exactly when I was invited to become part of the ETHICOMP steering committee that would take over from Simon and Terry, but I was invited, and accepted the invitation, knowing it was some way I could contribute back into the series that had helped me throughout my academic career.

After Sheffield, the job at the CCSR was indeed advertised, and I applied, once again with references from some of the ETHICOMP community as well as from previous jobs. I was fortunate to be the one chosen for the position, and started at the CCSR in a permanent position, the job I had been aspiring to since Linköping, all those years before.

4.3 Early career researcher
Coming to the CCSR was a big shakeup for me. Not only was I employed to teach and do research, but there were other administrative things I was now encouraged to partake in at the university level. I was quickly put on several committees, including the university's Athena SWAN committee, aimed at improving the university for women and families by putting in measures to become certified under their Bronze Award Scheme I was also invited to other committees, and so my time, unlike when I was a post-doctoral researcher, became very fractured with priorities juggled between completely different things. I am not ashamed to admit that I became overwhelmed by this and reached out to my network of mentors for help, which they provided, giving me

advice on time management and prioritisation. With their guidance and support, I improved quickly and settled into my new job. I was able to catch up with them at ETHICOMP (2013) in Kolding, Denmark (Flick and Sandvik, 2013).

Kolding was a different sort of ETHICOMP for me – I was finally one of the "usual suspects" and started interacting more as my mentors had interacted with me with some of the students there. I also took advice from some of the older members on career progression and juggling family commitments (especially from the women), which is, I suppose, a potential next hurdle. But the tone had definitely changed for me – not so much a focus on if or when I were to get a permanent job, but "now that you have a permanent job […]" which is the next stage of the academic's life. Once again I gave several papers – three, all co-authored with other academics (Flick and Sandvik, 2013; Weston, 2013 and Stahl *et al.*, 2013) – but this time instead of being concerned about being "up against a big name" or terrified of criticism, I approached the talks with a relaxed confidence, not only in my own ability, but because I knew that I was amongst "family".

I expect Kolding's ETHICOMP to be the model for ETHICOMPs to come for me – being a mentor to earlier career academics and seeking advice from more established academics. As this section has reflected on, the path I have come from starting-out PhD student through to early career researcher has relied heavily on the ETHICOMP community. In the next section, I would like to return to the literature and discuss my experiences in light of the literature introduced in the first section on mentorship, and to assess whether the ETHICOMP community fulfils my requirements for successful mentorship.

5. Mentorship and ETHICOMP
To return to the questions posed in the first section of this paper, it is now important to consider them in the light of the auto-ethnographical details of the ETHICOMP series and my career path. The relationships developed throughout my career at ETHICOMP and maintained between ETHICOMPs certainly fulfilled *instrumental* (through providing me with practical knowledge on career-related matters), *psychosocial* (through psychological support and an "outlet" for discussing career-related difficulties) and *networking* support (through introductions and being a place to easily meet new people). What was strikingly different from the literature was that these were not all given just by one or two people, but by a subset of the ETHICOMP community, many of whom I only received such mentorship from during the conferences themselves, and with whom I would then "catch up with" at the next ETHICOMP.

Thus, I argue that ETHICOMP is a "community" mentor – a group of people who nebulously are able to offer temporary (individually) but on-going support that could be considered mentor-like throughout a career progression. The atmosphere and nomenclature within the conference of the community as "family" fosters this embracing nature of relationships formed there between academics of all levels, and those who "come through the ranks" are usually happy to contribute when they are able to.

There are also significant philosophical concepts that have arisen throughout the years that explore some of the nuances of the ETHICOMP community mentor relationships. These will be addressed in the second subsection.

5.1 Fulfilment of practical characteristics of mentorship
The community mentorship of ETHICOMP fulfils the practical requirements set out in Section 2.4. These will now be discussed in more detail:

- That the mentorship relationship is gender-sensitive – in particular that women have the opportunity to be mentored by other women for their experience to challenge the male-dominated academic status quo.

As a woman in academia, I experienced this first hand in the ETHICOMP community. Many older female academics talked to me particularly about being a female academic – the expectations, the inequality and other aspects that might impact me in my career. This encouraged me to pursue my career in academia and also to be sensitive in discussions with other female academics who may not have been in such a privileged situation as my own:

- That the mentor and mentee have a good relationship and that mentorship is not forced upon them.

The fluid nature of ETHICOMP's attendees means that relationships come and go – I kept in contact with very few members of ETHICOMP outside of the conferences themselves. This did not mean I did not have strong relationships with them, but that, unlike traditional mentorships, there was no feeling of obligation on the parts of the mentors to follow-up on me until the next ETHICOMP they attended. The natural and voluntary forming of relationships in the conference arena meant that the mentorship was also not forced:

- That the mentorship follows the career goals and aspirations of the mentee and is relevant and inspiring to these.

Once again, the nature of ETHICOMP means this criterion is significantly well-satisfied. As described in my experiences, the mentorship was always extremely relevant to my own career goals and aspirations, and was a significant stimulant to the following of these. This type of mentorship is possibly more suited to this as well, as the irregular updates mean that both mentor and mentee are having to re-establish the context for the mentorship, understanding that things might have significantly changed in the interim:

- That mentor relationships are able to grow naturally through both formal and informal methods of establishment.

Like in point 2 above, this is a natural side-effect of the style of mentorship that ETHICOMP provides. It is largely informal, however, with the only formality in the "inclusive forum" requirement in the call for papers[2], which, in practice, means that it is explicitly a supportive conference that particularly nurtures students and early career academics. However, this is not formal in the sense that mentorship is a requirement or an established tradition. I am not convinced that a formal mentorship setting would work in this situation either. It seems to me that this would be more suited where the potential mentee is researching (whether as student or staff), as there are usually formal mechanisms in place in a work environment:

- That, where possible, mentees have the opportunity to have multiple, diverse mentor relationships.

This final criterion is one that ETHICOMP satisfies very easily. With the natural, voluntary and diverse nature of the mentor relationships available within the ETHICOMP community, this criterion is one that, arguably, is easier to satisfy within a conference community than often at a place of work or study. For many ETHICOMP attendees, ETHICOMP is often the only place that they can talk about their work and be fully understood. Few academics who attend ETHICOMP work within centres dedicated to the topic area. Thus, they can often suffer from academic isolation and lack of mentors that understand their work. The network of the ETHICOMP community can and, as seen in my experience, does provide the support and inspiration that is needed for early career researchers to aspire to a career in the field. Just as scientific communities benefit from pluralism and concurrency (Kornfeld and Hewitt, 1981), so too do scientists (and philosophers) benefit from diversity of points of view and approaches. ETHICOMP provides the framework in which this diversity can be easily experienced within a supportive context.

5.2 Important philosophical concepts

In this section, I will discuss a few concepts that have arisen out of both the literature on mentorship and in the reflection on my own experiences of having been both mentor and mentee. These came primarily out of the discussion following the presentation of this paper at the ETHICOMP Paris. The main ones I have identified are equality, judgement and empathy. This discussion is not aimed at delving deep into these concepts, but aims instead to look at them in the context of mentorship. Exploration of these concepts, however, may give further insight for those involved in conference communities to improve the acceptance and support given to early career researchers.

5.2.1 Equality. Something that was mentioned to me during the investigation of the mentorship relationship of ETHICOMP was that many senior members consider themselves to be "equals" with the junior members. This was a particularly interesting discovery to make because, although it made sense on reflection and is the experience I now share as a mentor, when I was a student it was the opposite, as reflected in my anxiety about presenting (even informally) my own work and fear of the feedback I might receive. As far as I was concerned, these senior members knew everything in my area and were in positions of authority on them. When explaining this to the particular member who brought it up, he was horrified that I might have thought I *was not* equal to him, and indicated that he felt that in some way, he had failed at promotion of equality at the conference.

The philosophical concept of equality is one that is difficult to define, being "not a single principle, but […] a complex group of principles" (Gosepath, 2011). Most definitions in this sense look at equality on a larger scale than that paper requires (such as wider-ranging social, political and other definitions), but I will use the more basic definition of *formal equality* of Aristotle's (1984): "treat like cases as like" (*Nicomachean Ethics, V.3. 1131a10-b15*), with the emphasis on *proportional equality*, as it can be used to describe hierarchies (Gosepath, 2011). In academia, there is a hierarchy, institutionalised since the first dialogues between master and student. In more modern times, this hierarchy is more distinct, with multiple steps between multiple levels. My reflection categorisation, distinguishing between my time as PhD student, through to post-doctoral researcher, and then on to early career researcher, highlights the traversal up the hierarchy. For those in the top levels of such a hierarchy (usually, these days,

those with permanent or tenured positions), it's easy to consider yourself as treating people equally (e.g. as in their ideas having equal importance to yours), but from a hierarchical perspective, they are "below" you, so do, in fact, "look up" to you – after all, if you have a permanent job, or are a senior researcher or a professor, and given the competitive nature of academia, you have shown yourself capable of research to a very high quality in the area. So it is natural for me, as a PhD student, to have looked up to someone like Simon Rogerson, a professor, head of department and organiser of ETHICOMP.

The difference in this hierarchical equality, however, should not be reflected in the equality of *treatment* of people or ideas, which is perhaps what the aforementioned ETHICOMP member was actively doing, but surprised by the fact that it did not lead to the feeling of hierarchical equality. This makes sense, as it's usual for, say, a PhD student to become extremely well-read in their particular area. The fact that they have several years to purely investigate a single topic makes them far more qualified to comment on that particular topic than many more senior staff who may juggle several research interests, projects and possibly teaching as well. Even senior academics who have expertise in the area ought to take students seriously, as fresh perspectives on older ideas can help to clarify issues, or explore new dimensions. This equal treatment of people and ideas throughout the academic hierarchy is very important to foster, as it can only bring positive effects to the field; yet another reason why mixing students and early career researchers with senior researchers, and encouraging discussion and mentorship capabilities is highly important. We may not be able to (or may not wish to) change the hierarchical equality issues, as deeply institutionally rooted as they are, but we can treat conference attendees and their ideas equally in a positive way, to foster positive discussion and improvement of ideas at all levels.

5.2.2 Judgement. Issues to do with judgement come into play in the equality issues above as well. We make judgements are made at the beginning of a mentorship relationship (will the relationship work?) throughout the mentoring process (is it working?), about the mentee's abilities and skills, by the mentee about the mentor's abilities and skills and by externals about the mentor or mentee due to their relationship (e.g. pre-judgement about a particular person based on the fact that they are mentored by a particular person; judgement of a potential mentor by a student based on their knowledge of the mentorship between the mentor and another mentee). In academia, as discussed previously, the mentorship relationship is extremely important for networking, and this networking involves a series of judgements based on the path the network relationship takes from the mentee to the person being introduced. In academia, it's often important who a PhD student or graduate's supervisor was, for example, as the person making the judgement can theoretically infer a lot about the student or graduate. These sorts of assessments are largely political in nature, and sometimes, a student or graduate's future career prospects can be harmed by association with a poor supervisor.

There are more and less formal methods for judging the abilities and skills of an academic. In more practical cases, such as in nursing, official peer judgement is part of the community responsibility, as it is required for nurses to engage in clinical practice and to be assessed on it. In this case, subjective judgements made about nursing ability is a topic of much discussion, but largely finds that it requires good mentorship, though the mentorship relationship is left largely to the students to develop, which leaves the mentorship relationship extremely one-sided and reliant on the courage and

determination of the mentees which may disadvantage certain types of students (Webb and Shakespeare, 2008). While this may work well within the nursing field, in less practical subjects that have no requirement for such relationships to be forced due to the requirements of the system, such as computer ethics, such one-sided, junior-member-driven relationships are less useful. Although the area of computer ethics is not the same as nursing, as discussed previously, equality of people and ideas is extremely important for good mentorship relationships, and this one-sided nature of the responsibility for the relationship is not conducive to satisfaction of that requirement. In some ways, ETHICOMP's informal structure actually helps here because it means that the mentorship relationships are also informal, so there is no pressure to maintain relationships that do not naturally develop. Judgement of ability in the ETHICOMP community largely comes through the papers submitted and discussion after the talks. This can allow both potential mentors and mentees to identify whether the relationship might be mutually beneficial. In addition, the judgement of the ability of a mentee does not end in assessment, unlike in the nursing example, so relationships evolve naturally, and are more conducive to dropping in and out as time permits, rather than being forced to fulfil a particular set of requirements.

What is particularly nice about the community is that if mentorship relationships go well, they can translate into character references for future jobs. I, personally, asked for a reference for jobs from one of my mentors I had never actually worked in a job with. Although this relationship was built on a little more outside of ETHICOMP, it had grown from the community mentorship detailed in the rest of this paper. In this way, early career researchers can ensure that any judgement made about their skills in a job application is balanced through a diverse range of references.

Another aspect of judgement is in the way feedback is given. As ETHICOMP is a conference, there are ample opportunities for early career researchers and students to gain feedback about their work. This is a naturally stressful time, as shown in my experiences. The sorts of feedback that are harsh in their judgement can be very damaging to a student or early career researcher. However, if the community is operating under a requirement of equality of ideas, this allows for feedback to be given that, instead of judging, is constructive and helps to build rapport between the members of the community. It has been my experience that academics who treat others' papers at ETHICOMP judgementally do not tend to stay in the community long – the community fosters a positive experience, rather than a judgemental one (in this sense).

5.2.3 Empathy. Philosophically speaking, the mentor/mentee relationship is always going to be a very personal experience. These relationships can be everything from coldly professional through to warm and friendly. Both the equality and judgement aspects discussed above rely heavily on empathy for the experiences to be positive and constructive. Additionally, following in Batson's footsteps, I would argue that a successful mentorship relationship requires a certain amount of empathy and altruistic behaviour, especially on the part of the mentor, who may not necessarily gain as much from the relationship as the mentee (or may not perceive themselves as doing so). In this case, if mentorship is in any way at least partially altruistic, empathy comes into play, as Batson found that empathy "empathy leads to genuinely altruistic motivations" (Stueber, 2014). Such empathy "can be increased by enhancing the perceived similarity between subject and target"(Stueber, 2014). As mentioned earlier, mentorship relationships tend to be ones where the individuals have similar values, being "same but

other". This allows for greater empathy to be employed in the relationships, but could potentially reinforce the gender norms that Stalker (1994) was concerned about. However, this does not mean that there cannot be empathy between a mentor and mentee of different genders, and this is where ETHICOMP as a community mentor can really shine – as a conference, it is able to engender certain norms (such as the lack of harsh judgement discussed before) and values (such as being open to participants at all stages of their research careers) in its participants, which are translated into setting basic normative expectations for the mentorship relationship.

Fortunately for people in the field of computer ethics, I believe that the very nature of the field opens us up to be more able to empathise than possibly those in other fields. The ability for us as ethicists to be able to reflect on our behaviour and practices and to assess them with regards to cultural, social and gender contexts, allows us an enhanced capability to be able to empathise with each other. Perhaps, it is this empathy that has allowed ETHICOMP to flourish in its ability to establish community mentor relationships.

5.3 Recommendations
Earlier I looked at the fulfilment of a set of practical characteristics of mentorship ETHICOMP was successful at, but I believe, it is also important to make some suggestions to other philosophical communities that may wish to replicate the success that ETHICOMP has made in facilitating mentor relationships, particularly taking into account the philosophical aspects discussed in the previous section. These are all linked to *psychosocial*, *networking* and *instrumental* support, which are key aspects of mentorship relationships, as discussed earlier.

The main recommendations to move a community along the path of ETHICOMP's "family" and beyond, are as follows:

- encouragement of equality (of ideas and people) by encouraging diversity in gender and background;
- encouragement of empathy through encouraging positive and constructive feedback and rejecting posturing or judgemental feedback;
- encouragement of empathy, constructive feedback, equality and networking opportunities through mixing sessions of early career researchers and students with the "big names";
- encouragement of overcoming fear of judgement, and promotion of equality of ideas by establishing sessions aimed at introductions, or seating senior members with more junior members at conference dinners, or encouraging senior members to invite junior members to social activities outside the conference, which need to be financially accessible; and
- educating members of the community about these practices, so that they understand the importance of facilitating inclusion of early career and student members of the community and nurturing them within the community in a positive and respectful manner.

Finally, it is important that organisers set an example by actively participating in these principles as well. Without good examples to follow, it is hard for members of a

community to adapt their behaviour, particularly if the conference has been run in a particular way for many years.

These recommendations work well within Bruner's *instructional scaffolding* framework, where more experienced learners (in this case, the mentors) are able to support newer learners (the mentees) in tasks, such as job-seeking, grant application writing, paper writing or giving a talk. Such scaffolding can provide the stability and support that allows the newer learner to "carry out or achieve a goal" beyond unassisted efforts (Wood *et al.*, 1976). In this scaffolding process, there are several main aspects that can be applied: *recruitment, reduction in degrees of freedom, direction maintenance, marking critical features, frustration control* and *demonstration*. The five recommendations mentioned above can be illustrated within this scaffolding theory as follows.

5.3.1 Recruitment. A conference community provides an ideal opportunity to recruit early career academics to engage in discourse in the field. Through providing activities such as giving talks, social events, etc., the community can provide a solid incentive mechanism to engage in its activities. Making such events accessible to those of diverse backgrounds can only be beneficial to the community and future scaffolding.

5.3.2 Reduction in degrees of freedom. This is where the community can significantly support the early career academic. From encouragement from acceptance of an abstract, through to the supportive constructive atmosphere for early career researchers such as PhD students, a conference community can provide the vital early stage support needed, and slowly let them become more confident within the community and "come into their own". Empathy is vital here, as the community needs to be able to identify the stage that the early career academic is at and adjusting the nature of the criticism, so that it is most constructive.

5.3.3 Direction maintenance. The community can help here by being able to give advice on career and research paths, collaborative efforts and other personal aspects that may affect a junior academic's career trajectory. For example, in my situation, having others available to help me with references allowed me to continue on my academic career path. If I had not had that assistance with my direction, I may have left academia.

5.3.4 Marking critical features. In this case, the community can provide constructive criticism that allows the early career academic to identify points of excellence as well as points for further improvement. This allows for the academics to overcome fear of judgement (if performed in a constructive way) and encourages positive interactions amongst academics of all levels if the conference is set up in an inclusive and diverse way.

5.3.5 Frustration control. Typically, this involves having some sort of guidance and/or safety net in place for a learner (Wood *et al.*, 1976), which could be interpreted to mean that more senior members should be present to be able to assist junior researchers in reflecting on the feedback received. This could be implemented through a chairing system (which ETHICOMP currently operates), where a senior member as chair has the ability to steer discussion and can potentially assist students that are having difficulty in a feedback session.

5.3.6 Demonstration. Once again, this is an opportunity for senior members to set an example for junior members, in terms of talks, conversations, feedback and the other principles that are expected within a community mentor setting. Explicit references to

such a setting and general education could also be useful for all members to be reminded that they are part of the community and, therefore, should adhere to these principles.

Embedding the above-mentioned recommendations into such a scaffolding model is helpful because it can show the practical mechanisms by which the community mentorship setting can be established. This can allow for communities to more easily picture the approaches that they might take to improving their mentorship opportunities within their community and positively encourage the next generation of scholars. Although instructional scaffolding is not the only potential model for the application of these recommendations, it fits with a mentoring approach, as there are multiple opportunities for sharing of the load amongst multiple individuals, and potential for the learner to quickly establish themselves and become part of the scaffolding themselves (e.g. such as through chairing a session).

6. Conclusion

In this paper, I have argued that ETHICOMP is a community mentor – different from traditional mentorship in that it is a loose connection of diverse mentors that, as a community, can inspire and support early career academics (including students) in their work. In exploring its role as a community mentor, I have also argued that it can be a successful mentor, according to criteria summarised from the literature, backed up by qualitative evidence provided through auto-ethnography of my own career progress and aspirations. This paper illustrates the conversation about mentorship in ETHICOMP using my experiences as a starting point, and as required by auto-ethnography, this discussion has continued at the Paris ETHICOMP (2014), giving rise to some thought into philosophical concepts related to mentorship and likely will in the future. From the first tentative days as a PhD student through to establishing myself in the post of Lecturer in Computing and Social Responsibility, I wish to pay tribute to the 20 years of ETHICOMP, without which I doubt I would have succeeded. Additionally, this paper shows that one of the side-effects of receiving this sort of mentorship is the drive to "pay it forward", in that I now wish to extend the support I received to other young academics – this paper being one of the ways in which I pursue this.

More generally, there are some lessons that can be learned from the experiences detailed here, so that other conferences can follow in ETHICOMP's footsteps in becoming a community mentor to its "family" (and not just be about senior academics' egos, requiring terrifying navigation Kelsky, 2011), which come out of the practical characteristics and the recommendations detailed above. An ideal candidate for such a starting this sort of community building would be a summer/winter school in a particular field, but more established scientific communities could benefit from re-thinking their established conference setups as well. Conferences need to be supportive of junior members of the field. Senior academics need to be open and welcoming, be happy to sit and have a meal with students instead of only sitting with their friends and colleagues. Women in particular should be encouraged to share ideas in non-threatening, constructive environments and listened to and encouraged by senior members of the community (both male and female). PhD students should not be isolated with single tracks, but sprinkled in amongst tracks with the "big names", so that they can get a variety of attendees at their papers for more feedback opportunities. Ultimately though it is the chance meetings – the people you sit with for lunch or dinner or the

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post-dinner pint – that end up being the most beneficial to many early career academics. Mentorship does not have to be about formal relationships over time – they can be as long as the dessert course or as short as a coffee, so make these accessible – particularly financially. This does not mean that traditional mentorship does not have any benefit – in fact the complementary nature of the community mentorship that conferences can offer can only improve the quality of input that a mentee receives, as diversity is an important part of effective mentorship. Conferences as community mentors have a lot to give to their communities – it's about facilitating the inclusion of the community members that can derive the most positive and career-changing experiences from them, by providing empathy through equality and constructive feedback to enhance skills and abilities and develop appropriate mentorship relationships.

Notes

1. One such example is available at: www.philosophy.ku.edu/mentoring-project/
2. For example, the call for the 2014 Paris ETHICOMP, http://ethicomp2014.org/

References

Antony, L. and Cudd, A.E. (2012), "The mentoring project", *Hypatia*, Vol. 27 No. 2, pp. 461-468.

Aristotle (1984), "Nicomachean ethics", in Barnes, J. (Ed.), *The Complete Works of Aristotle*, Princeton University Press, Princeton.

Athena, S.W.A.N. (2014), available at: www.athenaswan.org.uk/ (accessed 16 April 2014).

Crouch, M.A. (2012), "Implicit bias and gender (and other sorts of) diversity in philosophy and the academy in the context of the corporatized university", *Journal of Social Philosophy*, Vol. 43 No. 3, pp. 212-226.

Ellis, C., Adams, T.E. and Bochner, A.P. (2011), "Autoethnography: an overview", *Forum Qualitative Sozialforschung/Forum: Qualitative Social Research*, Vol. 12 No. 1 (November).

Flick, C. (2007), "Informed consent theory in information technology", *Proceedings of ETHICOMP 2007*, Tokyo, 27-29 March.

Flick, C. and Duquenoy, P. (2011), "Ethical tensions of online child protection", *Proceedings of ETHICOMP 2011*, Sheffield, 14-16 September.

Flick, C., Duquenoy, P. and Jones, M. (2011), "'Ghosty': an ethical internet resilience device", *Proceedings of ETHICOMP 2011*, Sheffield, 14-16 September.

Flick, C. and Sandvik, R. (2013). "Tor and the darknet: researching the world of hidden services", *Proceedings of ETHICOMP 2013*, Kolding, 12-14 June.

Gosepath, S. (2011), "Equality", in Zalta, E.N. (Ed.), *The Stanford Encyclopedia of Philosophy (Spring 2011 Edition)*, available at: http://plato.stanford.edu/archives/spr2011/entries/equality/ (accessed 25 July 2014).

Goujon, P. and Flick, C. (2010), "Conditions for an effectiveness of ethical reflexivity in ICT-based projects: from theory to practice", *Proceedings of ETHICOMP 2010*, Tarragona, 14-16 April.

Hardwick, S.W. (2005), "Mentoring early career faculty in geography: issues and strategies", *The Professional Geographer*, Vol. 57 No. 1, pp. 21-27.

Kelsky, K. (2011), "How to work the conference (part 2 of 3)", available at: http://theprofessorisin.com/2011/08/26/how-to-work-the-conference-part-two-of-three/ (accessed 16 July 2014).

Kornfeld, W.A. and Hewitt, C.E. (1981), "The scientific community metaphor", *IEEE Transactions on Systems, Man and Cybernetics*, Vol. 11 No. 1, pp. 24-33.

Kram, K.E. (1985), *Mentoring at Work: Developmental Relationships in Organisational Life*, Scott Foresman, Glenview, IL.

McBride, N. (2008), "Using performance ethnography to explore the human aspects of software quality", *Information Technology & People*, Vol. 21 No. 1, pp. 91-111.

Stahl, B.C., Flick, C. and Hall, R. (2013), "Evaluating research quality in technology ethics", *Proceedings of ETHICOMP 2013*, Kolding, 12-14 June.

Matthews, P. (2003), "Academic mentoring: enhancing the use of scarce resources", *Educational Management Administration and Leadership*, Vol. 31 No. 3, pp. 313-334.

Stalker, J. (1994), "Athene in academe: women mentoring women in the academy", *International Journal of Lifelong Education*, Vol. 13 No. 5, pp. 361-372.

Stueber, K. (2014), "Empathy", in Zalta, E.N. (Ed.), *The Stanford Encyclopedia of Philosophy (Spring 2014 Edition)*, available at: http://plato.stanford.edu/archives/spr2014/entries/empathy/ (accessed 29 July 2014).

Tenenbaum, H.R., Crosby, F.J. and Gliner, M.D. (2001), "Mentoring relationships in graduate school", *Journal of Vocational Behavior*, Vol. 59 No. 3, pp. 326-341.

Valian, V. (2005), "Beyond gender schemas: improving the advancement of women in academia", *Hypatia*, Vol. 20 No. 3, pp. 198-213.

Webb, C. and Shakespeare, P. (2008), "Judgements about mentoring relationships in nurse education", *Nurse Educ Today*, Vol. 28 No. 5, pp. 563-571.

Weston, D. and Flick, C. (2013), "Printable guns is an idea whose time has come", *Proceedings of ETHICOMP 2013*, Kolding, 12-14 June.

Wood, D., Bruner, J.S. and Ross, G. (1976), "The role of tutoring in problem solving", *Journal of Child Psychology and Psychiatry*, Vol. 17 No. 2, pp. 89-100.

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