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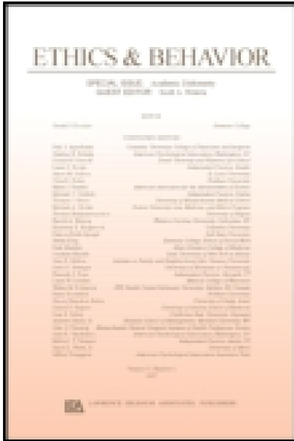

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Ethical Issues in Doctoral Supervision: The Perspectives of PhD Students in the Natural and Behavioral Sciences

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Ethical Issues in Doctoral Supervision: The Perspectives of PhD Students in the Natural and Behavioral Sciences

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Our aim was to identify the ethical issues faced by students in the behavioral and natural sciences during their doctoral programmes. The participants were 28 PhD students who were interviewed about their doctoral study and supervision experiences. We identified a total of 102 ethical issues compromising the principles of nonmaleficence, beneficence, autonomy, justice, or fidelity. There were some differences in emphases, with the students in the behavioral sciences displaying a broader range of ethical compromises than the students in the natural sciences. Ethical problems emerged in the individual supervisor–student relationships, but often problems involving the scholarly community appeared in the background.

Keywords: doctoral supervision, doctoral students, ethical issues, natural sciences, behavioral sciences

Learning ethical codes of conduct is a central part of researcher development. Most students learn ethical guidelines and codes of conduct from their advisors or senior colleagues (Alfredo & Hart, 2011). This suggests that the quality of the ethical conduct adopted by students is highly dependent on the various supervisory practices they encounter during their studies.

Supervision does not, however, exist in a vacuum that consists only of the student and the supervisor, but rather is rooted in the particular context of a scholarly community (Becher & Trowler, 1989, 1989; Dysthe, Samara, & Westrheim, 2006). This means that the supervisory relationship is an arena for mediating disciplinary traditions, practices, cultures, and norms. Furthermore, supervision itself is often a collective enterprise, including cosupervision and the activities of a research or seminar group (Park, 2005). Hence, doctoral supervision is highly affected by the ethical codes, norms, and practices of the scholarly community as a whole (Kitchener, 1992). Students quickly pick up these "rules of the game," that is, the community's implicit ethical codes of conduct.

The literature on research ethics indicates that, although formal ethics training is important in instilling knowledge of ethical norms and standards (e.g. Burr & King, 2012; Zucchero, 2008), contextual aspects of an academic community, such as the ethical climate or culture (Ferguson

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et al., 2007; Kalichman & Friedman, 1992; Roberts, Kavussanu, & Sprague, 2001), as well as leadership, collective beliefs, and behaviors (Ferguson et al., 2007) ultimately influence scholars' willingness (or unwillingness) to engage in unethical behavior in research. It has been shown, for instance, that conflict between institutional and personal values and lack of support are likely to foster academic misconduct (Bruhn, 2008). Moreover, it has been suggested that highly competitive institutions, which focus on "weeding out" the less successful students from the more successful ones, are likely to foster norms counter to academic ideals, such as emphasis on personal gain over the pursuit of knowledge and discovery (Anderson & Louis, 1994).

Still, little is known about the kinds of ethical problems related to doctoral supervision from the perspective of doctoral students. The aim was to identify the ethical issues in supervision encountered by students in the behavioral and natural sciences during their doctoral programs to support research communities and individuals in identifying potential ethical pitfalls and help them create ethically sustainable solutions. By supervision in the Finnish context, we mean the advisory context in which doctoral students pursue their studies. The responsibility of the supervision can be on both individuals and research teams. Doctoral students have usually two assigned supervisors who advise on the research conducted for the dissertation as well as on other studies within the framework of the doctoral degree. These individuals can also be team leaders and are typically university professors and docents (also known as adjunct professors).

THE IMPORTANCE OF DOCTORAL SUPERVISION EXPERIENCES

The quantity and quality of supervision have been shown to have a significant impact on the doctoral experience (e.g., Knowles, 1999; Mainhard, Van der Rijst, Van Tartwijk, & Wubbels, 2009; Seagram, Gould, & Pyke, 1998). It is evident that supervision contributes to degree completion, length of time-to-candidacy, doctoral student well-being, and satisfaction with the overall doctoral experience, as well as competencies developed while studying (Case, 2008; Meyer, Shanahan, & Laugksch, 2005; Pyhältö, 2011). For example, an open, honest, and ongoing discussion between doctoral students and their supervisors concerning student experiences, expectations, and goals are reported to have a positive influence on students' persistence (Hoskins & Goldberg, 2005). Haworth and Bair (2000), on the other hand, showed that individualized mentoring and engagement in authentic problem solving during research-based discovery activities was related to meaningful learning experiences reported by doctoral students. Frequent supervision has been found to correlate with the successful completion of degrees (Woodward, 1993). Good supervision has also been reported to lead to a more positive postdoctoral experience (Scaffidi & Berman, 2011).

By contrast, lack of supervision, overdependence on supervisors, and being at cross-purposes with a supervisor are reported as causing problems, such as prolongation of studies, lower levels of well-being, and dropping out (e.g., Dysthe et al., 2006; Edwards, 2002; Hasrati, 2005; Mackinnon, 2004). Also problems in supervisory relationships, including lack of supervision or interpersonal friction, have been reported to cause problems in doctoral studies (e.g., Pyhältö, 2011). Consequently, supervision has been identified as one of the most important determinants of doctoral studies.

SUPERVISION AS AN ARENA FOR ETHICAL PROBLEM SOLVING

Doctoral supervision provides a potential arena for learning to identify problems that arise during doctoral studies and solve them in an ethically sustainable manner. Some of the ethical issues are domain specific and often relate to conducting doctoral research, such as obtaining or negotiating informed consent, ensuring anonymity of participants, and maintaining confidentiality of data. However, ethical issues can also be more general, for example, involving relationships with colleagues and stakeholders, infrastructures and other parameters, recognition of authorship, and dissemination of findings. Prior research has identified a variety of ethical problems embedded in supervision, such as incompetent and inadequate supervision, supervision abandonment, intrusion of supervisor views, abusive and exploitative supervision, dual relationships, encouragement to commit fraud, and authorship issues (Goodyear, Crego, & Johnston, 1992). However, not all the challenges faced in the course of doctoral studies or in supervision are ethical in nature. Furthermore, there are many ways to solve problems, including in ethically sustainable or non-sustainable ways. Therefore, well-grounded criteria for identifying ethical problems in the context of doctoral education are needed.

The present study draws on a model of ethical principles including (a) *respect for autonomy*, (b) *avoiding harm* (nonmaleficence), (c) *benefiting others* (beneficence), (d) *being just* (justice), and (e) *being faithful* (fidelity; Kitchener, 1985, 2000). Kitchener attempted to describe what these principles might entail as contextualized in a university counseling and advising context, which is also the context of our study, and thus we felt that the model would be applicable as a theoretical tool in the analysis of the ethics of supervision. The ideas proposed in these principles can be found to underpin ethical guidelines at the national and international level irrespective of the field they are intended to serve (e.g., European Commission, 2007; Finnish Advisory Board on Research Integrity, 2012; see also the analysis of European ethical guidelines by Godecharle, Nemery, & Dierickx, 2013).

Respect for autonomy postulates the rights of individuals to decide how to live and make decisions concerning their life and includes the right to self-determination and the right to privacy. There is evidence that lack of autonomy can cause serious problems for early career academics (Sutherland, 2013). In their previous study, Löfström and Pyhältö (2012) showed that natural and behavioral sciences supervisors sometimes experienced uncertainty in the ambiguous area between supervising a student and imposing on the student's autonomy.

The principle of nonmaleficence refers to the avoidance of activities that would harm others psychologically, physically, or socially. A significant body of evidence shows that doctoral students experience distress during their studies (Hyun, Quinn, Madon, & Lustig, 2007; Kurtz-Costes, Helmke, & Ülkü -Steiner, 2006) and may face discrimination based on their ethnic background or gender (Truong, 2010). Also, attrition rates among doctoral students are high (Golde, Bueschell, Jones, & Walker, 2009; McAlpine & Norton, 2006). Löfström and Pyhältö (2012), for instance, found that more than half of the ethical issues in supervision identified in interviews with supervisors pertained to nonmaleficence as an ethical principle being at stake. Typically, the harm described arose from exploitation and abuse or role confusion.

In addition, ethical codes of conduct include beneficence: making a positive contribution to another's welfare and promoting the personal growth of others by helping, being kind, having mercy, or engaging in charitable acts. Beneficence can be compromised by not providing support (e.g., feedback, encouragement) to students. Pyhältö, Stubb and Lonka (2009) found that the

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experience of being isolated and the lack of supervisory support were related to considerations of withdrawal from doctoral studies, as well as lower levels of satisfaction among doctoral candidates with their studies.

The principle of justice is realized through fairness (e.g., fair distribution of goods, services, or rewards), impartiality, reciprocity, and the promotion of equality. However, what is perceived as equitable may vary, not only between doctoral candidates and supervisors but also according to the context. There is some evidence that supervisors rarely identify justice being at stake in the supervisory relationship (Löfström & Pyhältö, 2012).

The principle of fidelity involves the obligation to keep promises, to be loyal and truthful, and to show respect for others. Fidelity is at the core of relationships between individuals: Without it, forming and sustaining any relationship would be very difficult, if not impossible. Special obligations come with relationships between individuals of unequal knowledge or power, for instance, professionals and their clients (Kitchener, 1985), or in our case, the supervisor and the student. If fidelity in a supervisory relationship is based only on an implicit agreement, then there is a danger that the student's and the supervisor's expectations and beliefs about the working practices are not aligned, which in turn may cause conflict. Löfström and Pyhältö (2012) showed that from the supervisor's perspective, in practice compromises in fidelity meant supervision abandonment. Qualitatively, there are different manifestations of abandonment of doctoral students, ranging from the supervisor's failure to follow through with the supervision commitment despite efforts to do so (e.g., transferring to another university or retirement) to neglect (Goodyear et al., 1992).

COLLECTIVE SUPERVISORY PRACTICES AND ETHICAL PROBLEMS

The supervisory relationship does not exist in a vacuum between the supervisor and the student. Rather, it is highly embedded in the working environment provided by the scholarly community (e.g., Barnes & Austin 2009; Dysthe et al., 2006; Franke & Arvidsson, 2011; Halse & Malfroy, 2010; Pearson & Brew, 2002). Hence, doctoral student learning is deeply embedded in the supervisory practices of the scholarly community as a whole, including ethical codes of conduct. This learning pertains to both formal and informal types of supervision. Formal types of supervisory activities often entail institutional-level activities, such as courses for doctoral students, shared practices among research or seminar groups, and participation in conferences. Informal supervision often takes place in less official encounters within academia, such as during coffee breaks or other social get-togethers.

The supervisory practices have their own cultural roots and reflect the values, norms, and conceptions of a certain research domain while also being multidisciplinary or interdisciplinary in nature (Holley, 2010). However, the practices mediating the ethical standards are often implicit rather than explicit. Although ethical guidelines describe desirable and nondesirable conduct, rules for interaction or decision making in the research team or community may not be covered by the guidelines and may not be explicated anywhere else (cf. Ferguson et al., 2007). The attitudes and behaviors of faculty members mediated by the practices effectively convey the true ethical standards in the community (Kitchener, 1992). Hence, unspoken ethical rules and practices exist in various scholarly communities, and doctoral candidates generally learn these by participating in the practices without explicit guidance.

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Scholarly communities offer various arenas for student participation. The more opportunities there are to interact with academics in the research community, the more likely students are to share and gain ideas and to learn (Golde, Bueschell, Jones, & Walker, 2009). Students' observations of how faculty and student behaviors and departmental practices reflect ethical standards have a strong influence on how these students come to view the integrity of their field as a whole (Fisher, Fried, & Feldman, 2009). During their studies, students work with numerous academics and are thus exposed to various subcultures and roles in a complex community. Prior research shows that student involvement with these practices contributes to the doctoral experience (e.g., Gardner, 2008, 2010; Pyhältö et al., 2009). True, Alexander, and Richman (2011) found that ethical wrongdoings were most prevalent among community research workers who were not well integrated into their academic communities. It has been suggested that the stronger the tradition of a department in providing student feedback, the less likely the students are to witness research misconduct (Anderson, Louis, & Earle, 1994). In particular, emphasizing universal social principles and responsibility rather than rule-governed behavior, ethics visibility on campus, and interdisciplinary proactive identification of ethical issues in the research community have been suggested as factors that promote the learning of ethically sustainable codes of conduct (Ferguson et al., 2007). There is also evidence, however, that students who collaborated closely with faculty on research projects were also the most frequently exposed to unethical behavior (Anderson et al., 1994). This implies that the practices adopted by the community may either inhibit or promote the learning of ethically sustainable problem solving. Furthermore, students themselves may behave in a manner that can challenge the supervisor's skills in ethically sustainable decision making (Löfström & Pyhältö, 2012).

This study was intended to gain a better understanding of the kinds of ethical problems in supervision faced by students during their doctoral experience. The following research questions were addressed: What ethical problems related to supervision do doctoral students face during their studies? Are there differences in these ethical problems between the doctoral students in behavioral sciences versus those in the natural sciences?

This study is part of a larger national research project on doctoral education in Finland that seeks to understand the process of PhD education (cf. Pyhältö et al., 2009).

CONTEXT: DOCTORAL EDUCATION IN THE BEHAVIORAL AND NATURAL SCIENCES

Finnish doctoral education has certain characteristics that differ from the Anglo American system. In Finland, doctoral studies are heavily centred on conducting research, which is estimated as 75% of the total work for a doctoral degree, and usually begins at the start of the doctoral studies. For instance, there is no extensive course work required before undertaking the doctoral research. Subject and methodological studies including ethics training require 40 to 60 ECTS credits (1 credit in the European Credit Transfer System equals approximately 27 hr of study) for a doctoral degree, depending on the discipline. The extent and nature of ethics training is generally not specified and could vary depending on the field, but for instance the Faculty of Behavioral Sciences offer a 2-credit course on research ethics for doctoral students.

In the natural sciences, the majority (81%) of doctoral candidates pursue article-based dissertations. These consist of three to five internationally refereed journal articles coauthored with the

supervisor and other senior researchers together with a summary, which includes an introduction and a discussion synthesising methodological aspects and the article findings (Pyhältö, 2011). Accordingly, doctoral candidates in the natural sciences often work intensively in relatively strong research communities that include several doctoral students, postdoctoral students, and professors, who collectively focus on solving shared research problems related to the research project.

Likewise, in the behavioral sciences, the article compilation with a synthesising summary has become the dominant form (66%) of dissertation in recent years (Pyhältö, 2011). The article compilation, however, is more prevalent in psychology than in educational science, in which the monograph is still the dominant dissertation form. Doctoral students who write monographs often engage in seminars, and supervision is based on supervisor–student dyads rather than intensive work in research groups. Doctoral supervision is usually based on an apprenticeship, both in the research groups and in the supervisor–student dyads (Löfström & Pyhältö, 2012), similar to the Anglo American system.

Doctoral education is publicly funded and free for the students, who nevertheless have to pay for their costs of living, usually covered by personal grants, project funding, or wages earned by working outside the university (Pyhältö, 2011). A description of doctoral education in Finland can be found in the *International Postgraduate Student Mirror* (2006) and in Saari and Moilanen (2012).

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METHOD

Participants

For this study, 28 doctoral students were interviewed. The participants were 21 students in the behavioral sciences (17 female, four male) and seven students in the natural sciences (two female, five male) from a research-intensive university in Finland. All the students had master's degrees, and they were in different phases of their doctoral process. According to the students' own estimates, 11 were at the beginning of the doctoral process, five were in the middle, and nine were in the last phases. Three participants were recently graduated. Nineteen of the participants were or had been full-time students, and eight were pursuing their doctoral studies part time. Six of the students wrote a monograph-type dissertation, 16 wrote an article-based dissertation, and six students were undecided. All the participants were interviewed on a voluntary basis. Due to the sensitive nature of some of the data, we have not provided background information for the interview quotations. We have neutralized references to the gender of the interviewees and of the gender of people mentioned in order to protect the research participants and third parties.

Interviews

Semistructured interview data were collected in 2007–2008. The data were collected during the field work in the case communities. At first, the researchers participated in research seminars organized by the communities informing potential research participants about the research project, including aims, procedures, and ethical codes. Participants were also given an opportunity to ask about the project. After this, the interview invitation accompanied with a research project

information letter was sent by e-mail to the doctoral students who were conducting their doctoral studies within the communities at the time. The e-mail addresses were obtained from contact staff in the research communities to be investigated. A doctoral student trained for the task then conducted the interviews with those students who volunteered to participate. It was important that the doctoral students participating in the research felt comfortable with the interviewer and that the situation would be nonthreatening and safe. Therefore, another doctoral student was deemed the best interviewer for this target group. The authors had no relationship with the interviewed students. This was considered crucial for maintaining objectivity. On average each interview lasted approximately 1 hr (with a range of 30 min to almost 3 hr; Stubb, Pyhältö, & Lonka, 2012). The interviews were recorded and transcribed verbatim.

The interviews were designed to investigate the doctoral students' experiences in the dissertation process and how they perceived themselves during its course (for detailed questions see Stubb, 2012, pp. 89–90). At the beginning of the interviews the students were asked a few background questions about their discipline or subject, the time spent on their dissertations/studies, the phase of the process in which they then were, the estimated or actual time of graduation, the form of the dissertation, and whether they were working on the document full time or part time. The interviews focused both on the retrospection of experiences during the PhD process and on the present situation (Stubb et al., 2012). Ethical issues in supervision were not an explicit interview topic. Instead, this theme pervaded many of the subjects explored in the interviews. Specific questions about the ethics of supervision may have produced different findings. We are confident that the data capture authentic manifestations of ethical problems in supervisory relationships, some of which the students themselves were likely unaware of. Yet in some of the experiences they described, the ethically problematic nature seemed painfully obvious to both interviewer and interviewee. The interview scheme was pilot tested before the data collection began, using 11 doctoral students from the natural and behavioral sciences.

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Analysis

The data were analysed by theory-driven analysis. We used Kitchener's (1985, 2000) five ethical principles as a framework for recognizing ethical issues. With these principles in mind, we extracted phrases from the interviews so that the unit of analysis was a whole thought or theme. The reading strategy was focused on overt ethical issues that were either explicit in the interviews or suggested as ethical issues by the interviewee. Also another reading strategy focusing on latent ethical themes (cf. Braun & Clarke, 2006), which were neither suggested as being ethical issues by the interviewee nor overt in what the interviewees said, was also applied. Four latent topics were identified—gendered practices, admission practices, timing of support, and discourse of overwhelming industriousness.

Using these reading strategies, 139 units that could potentially involve ethical issues in light of the five ethical principles were extracted from the data as a result of several readings of the whole data set. All units were subjected to a careful ethical analysis by asking each the questions, What is at stake? Which ethical principle is compromised and how? At the start of the analysis, ethical principles guided the recognition of ethical issues in supervision, but an analysis of the extractions revealed that not all units were primarily ethical issues but could be methodological or other problems that did not threaten the principles of beneficence, nonmaleficence, autonomy, fidelity, or justice. In this sense, it could be said that we moved between deductive and inductive processes

in identifying the whole range of potential ethical issues in the data but then narrowing these down as we compared them against the five ethical principles. Through the highly iterative process of several readings of the data the number of retained units was eventually 102. The readings functioned as validation checkpoints on the nature of the ethical principles (Why and how is ethics at stake?) and the suggested subcategories, which were identified to distinguish the selected units within each of the five broader categories (i.e., those aligning with the ethical principles). So, for instance, we identified various ways of breaching the principle of nonmaleficence (main category), including exploitation, abuse and misappropriation (subcategories).

Each reading also served an important role in the overall process. For instance, in the third reading subcategories and their contents were specified. In the third and fourth iteration the number of retained units was reduced, mainly because units were combined if they appeared part of the same discussion, even if they were dispersed throughout the interview. In these cases the student, while answering an interview question, might recall something that pertained to a previous question and revert back to a previous discussion, or there could be experiences that the students felt a need to return to repeatedly, perhaps in an attempt to understand what had happened and sort out their own emotional reactions to an event. The same participant could, however, have more than one ethical issue in the same category. This was the case only with two students in whose interviews we identified two ethical breaches that were clearly different cases, but both pertained to compromising the same ethical principle.

The analysis was conducted by the first author, but between the iterations the authors exchanged views about the inclusive/exclusive nature of the categories. For instance, one of the issues discussed was whether to include ethical issues attributable to the structures of the doctoral programs, as these would be issues that may influence how ethical the students experience the supervision to be but which individual supervisors might not be able to influence much. In this case, we ended up agreeing to exclude structural issues in general, but we retained two units of analysis where we felt that the structural issue clearly hampered the quality of the supervision that the student received. Another discussion pertained to the identification of the role of students' life situations in experiencing problems with the supervision. We made the decision to include only those units in which we interpreted that the supervisor could have benefitted the student significantly by showing some understanding and compassion for the student's situation (but had not done so).

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RESULTS

The doctoral students described a variety of events and experiences that could be considered as ethically problematic ($f = 102$; Table 1), ranging from brief events or experiences to extensive series of episodes, some of which could go on for years.

We identified on an average 3.3 ethical issues per student in the interviews of the students in natural sciences and 3.9 ethical issues per student in the interviews of the students in behavioral sciences. Next we highlight the disciplinary aspects that were relevant.

Avoiding Harm

The principle of avoiding harm was compromised in 17 episodes described by the students. The harm took the forms of exploitation, abuse, and misappropriation. In the students' experiences, exploitation typically entailed overly high workloads unrelated to their own PhD work. In many

TABLE 1
Ethical Problems in Supervision

Principle at Stake and % of Ethical Issues	*Ethical Issues*	*Frequency (f)*
Avoiding harm (17)	Exploitation	6
	Abuse	6
	Misappropriation	5
Beneficence (34)	Well-being	23
	Lack of a collective culture	6
	Competence and adequacy of support	4
	Structural issues	2
Autonomy (12)	Intrusion of supervisor views	6
	Narrowness of perspectives	6
Fidelity (25)	Abandonment	14
	Inadequate supervision	9
	Disrespect	3
Justice (12)	Inequity	9
	Unfair owner-/authorship	3
	Total	102

cases, students felt that the other work in the research projects had prevented them from finishing their dissertation on time. Students alluded to being used as economic labor, and some felt that the supervisors in charge of the projects had no idea of how labor-intensive the other assignments were. Although these experiences were common in both fields, they were relatively frequent among the students in the natural sciences. The supervisors' expectations of doctoral students in terms of project work and PhD studies were seen as unrealistic:

> Sometimes I've had difficulties concentrating on my own research, not to mention writing a dissertation, because I've had to assist in other people's projects. It's work, but if you think about it from the perspective of the doctoral dissertation, it eats up the time from your own research. It's irritating when professors ask when the dissertation is gonna be ready, and you've just been sweating blood, and you are like 'I've had a bit of things to do!' But when you are in a research group you do the work. For instance, if someone is on parental leave, of course the project goes on, and someone will take care of it. But it takes away time from your doctoral research.

Abuse usually took the form of humiliating the students, often publicly, and fostering a culture of severe criticism. In the following excerpt the student had, according to the supervisor, exceeded the student's authority by trying to make arrangements for the PhD seminar. The student described the experience as a telling-off and a public humiliation:

> The supervisor first used a significant part of the seminar yelling at me about how I cannot make decisions about the seminar, that it's none of my business, that it's against all principles, that something terrible has now happened, and what do I think I'm doing and what are my priorities anyway. I just sat there for a long time and listened to the yelling. And even now [crying] I start to cry. Then another senior researcher said—and I will always remember this—that my research is trivial, that what I had prepared for my presentation was worth nothing. I thought, well thanks, that was a 'great' comment

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> right now! It was like a public humiliation and then an attack. Of course, most of the people [there] were embarrassed and silent. That's how the community works. You are silent, and people kind of lose their voice.

Students had experienced their ideas or data being misappropriated. Students reported cases in which they were very careful not to share ideas with others in the research community for fear of misappropriation.

> There is a power imbalance, competition and ownership issues, and although I would whole-heartedly like to trust my supervisor, a couple of times I've had the feeling that I can't tell my ideas to the supervisor, who is doing research on the same topic. The ideas might appear in a conference paper or something like that before I have put them anywhere. That's awkward. I don't want to become cynical . . . . I have been paranoid a couple of times because I got the feeling that my other supervisor too had presented my ideas at a conference in which this supervisor had decided the order of the presentations. I sent my presentation beforehand so my supervisor knew what I was going to talk about. My supervisor then changed the topic and talked about the exact same thing as my presentation. When it was my turn to present, I was embarrassed to say that I am now talking about the same questions, even though I knew that that was not my supervisor's initial theme. I have become paranoid, and I ask myself if there is something I should figure out. They are really tricky, these hierarchies here, and when you are a beginner, you are always the one without power.

The students felt helpless and without the ability to reclaim ownership, but they also reported strategies for coping with the situation. One student had solved the problem by detaching himself or herself from the supervisor and avoiding contact. This, however, resulted in a lack of supervision altogether. Another student had solved the situation by always inviting a trusted third person to be present in the supervision encounters.

Beneficence

Ethical issues categorized as compromises of beneficence differed from the category of "Avoiding harm" in that in the latter, the outcomes were the results of active or explicit actions or behaviors, whereas issues in the Beneficence category were the result of a more passive approach or lack of action. Four different themes were identified in the data—threat of well-being, lack of a collective culture, lack of competence and adequacy of support, and structural issues ($f = 35$).

Students' well-being was at stake in many ways. Students were concerned about their own well-being and coping, they felt that their supervisors did not care about their well-being, and they believed that there was a general lack of support of their well-being. It became evident that the culture of the research community might support working strategies which, in the long run, would take their toll even on the most persistent researcher. Supervisors and senior members of the research community function as role models, and students might feel pressured to adopt the work strategies of their more experienced colleagues. One student said,

> Really often you hear colleagues say things like 'I haven't had a vacation since in three years; maybe I should enjoy summer this year.' . . . I take at least three weeks off. It is a way to stay alive, somehow. Especially after I had a breakdown, I'm really serious about not compromising my spare time, and I don't feel bad about it.

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Students reported difficulties combining their various life commitments with their PhD studies, and to some extent this appeared gender related. Difficulties balancing the various life commitments may not be an ethical issue in supervision, but it could become problematic if the student feels that there is no way to get any understanding from the supervisor:

> I don't feel like telling my supervisor about bigger things because you never know what kind of reaction you get, or whether it is something that'll influence our relationship in the future. I would feel relieved if I could talk about other things, which would make my work input more understandable to the supervisor. . . . I can't say that 'Hey, I've decided not to use weekends for this unless I really have to.' I've asked my supervisor if it's possible to be a good researcher eight hours a day, and the response was clearly 'No!' So maybe we have different understandings of what it means to be a good researcher. For my supervisor it's probably Charles Darwin and the likes of him, and I said that they were all men, and they had wives doing the home chores, and my supervisor said, 'Well, that's how it is.'

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Some students reported personal crises and their escalating nature when personal and family life, PhD studies, and work become too much to cope with all at one time, and they felt that they were unable to discuss and gain support from their supervisors. The inability of the academic community to recognise fatigue becomes particularly evident in a case in which a student who is on the verge of a personal crisis is admitted to a PhD program. This is a poor point of departure for doctoral studies, which in many ways test the perseverance of students even in stable life situations. The lack of positive feedback, encouragement, and integration into the research community further threatened the well-being of doctoral students.

Autonomy

Autonomy refers to the individuals' right to make decisions regarding themselves; their lives; and, in the context of the research, their doctoral process and research. Two distinct types of autonomy-related issues emerged in the data, namely, the intrusion of a supervisor's views and narrowness of perspectives ($f = 12$). Autonomy-threatening ethical issues were much more common among the students in the behavioral sciences than among those in the natural sciences.

For these students, intrusion of a supervisor's views meant that they were not able to develop their researcher self fully while in the shadow of a powerful supervisor. They were not allowed to make choices in their dissertation research, such as a choosing topic. Their ideas were torpedoed, and they felt that the supervisor told them what to do without giving them any opportunity to negotiate. Sometimes the power imbalance took on features that could be described as manipulative. Students described having been subjected to the supervisor's unjustified and random decision making. The following interview excerpt captures many of these features:

> When I started, no one talked about [a particular phenomenon], but it started to appear in the media. There would have been a lot to research, but my supervisor said that I couldn't take this perspective on my research, and if I wanted to research that subject, then I would have to give up my place in the doctoral progamme. That was a threat! I remember thinking, this is not right! If my research interest and motivation are passed over in such a rude way, it leaves its marks on the rest of the process. And especially when it was dictated to me along with a threat! . . . I had been working with [the phenomenon] for some years, and then had to leave this entire knowledge base behind and start anew

> with a topic I knew nothing about. I had to start from scratch. Making people start from scratch every once in a while is an effective way to make them feel insignificant and incompetent.

Narrowness of perspectives implied that the students were forced to comply with specific theoretical and methodological parameters if they wished to stay within a research group. Criticism of prevailing views was not allowed; students who objected would be reprimanded.

> I have learned not to tell anything, my ideas, to my supervisor because that could result in total trashing. . . . We are taught to question things, and that's good. Knowledge is cumulative, and the field doesn't develop unless it draws upon different perspectives and critiques the status quo. And that's the dilemma. It would be great to be able to truly have a discussion with my supervisor. But it isn't like that. My supervisor will say, 'No, no, no, that is not how it goes!' And this is a problem in my opinion. . . . The exchange of ideas is not as open as one would like it to be.

Students also described cases in which autonomy was supported in powerful ways, that is, the supervisor supported the student's thinking and encouraged students to develop their own ideas.

Fidelity

Fidelity was interpreted to mean loyalty, truthfulness, showing respect, and keeping promises. Four distinct compromises of fidelity emerged in the data—supervision abandonment, inadequate supervision, disrespect and a student's failure to keep a promise or commitment ($f = 28$).

The experiences of supervision abandonment arose in a variety of different situations. Some students reported that there had been a lack of supervision from the start of their doctoral studies with no one taking responsibility, even though admission into a doctoral program requires assigning at least one supervisor, preferably two, who are committed to the student's supervision. Two students reported that, in one case, a supervisor took parental leave, and in the other case the supervisor was too ill to supervise. However unintentional, both cases had resulted in supervision abandonment, and the academic community failed to take responsibility.

Five students found that their supervisors were committed to supervision while a research project lasted, but they did not go on to follow the student through the full doctoral process. When the research projects ended, the students were left to their own devices to sort out often huge amounts of data on their own. This was a phase in which the supervisor would have been sorely needed to help the student focus and narrow down the material to a manageable size. One student mentioned having collected data for 3 years, and when the project was over, the student was overwhelmed with the massive amount of material. As one put it,

> Students change and projects change, and supervisors lose interest and move on to new projects in which they have doctoral students, and you are left hanging out there on your own.

In three cases the supervisors' behavior exhibited elements of free riding. A student complained about the lack of supervision but was glad that the supervisor had promised to be more available when the student finalized the dissertation. The student did not see a problem with this and was simply grateful for the opportunity to receive support at last. However, the situation raises questions about why the supervisor had not engaged before and about the timeliness of the support.

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Inadequate supervision was the result of situations in which the students felt that the supervisors had too many supervisees or were too busy to provide proper direction.

Experiences of supervision abandonment were common throughout the data. In the natural sciences these were relatively more prevalent than in the behavioral sciences. In addition to the numerous cases in which supervision abandonment was an ethical issue, there were also positive counteractions. In one case involving parental leave, a supervisor transition was handled smoothly to assure continuity in the process. In several other cases, a senior researcher or others in the research community took responsibility for supervision when the assigned supervisor was too busy or unavailable. Supervisors also facilitated the integration of doctoral students into the research community by encouraging its members to accept the student, thus connecting the person with a number of resource people.

Justice

Justice was interpreted to include fairness, impartiality, equality, and reciprocity. There were two types of justice-related problems in the interviewees' accounts—inequity and unfair ownership/authorship ($f = 12$). Inequity experiences were more common among students in the natural sciences than among those in the behavioral sciences.

Inequity took the form of different treatment based on students' disciplinary background and research topic. Assistantships were allocated to favor students with certain disciplinary backgrounds.

> There's a caste system. There is clearly an implicit hierarchy, and if your background is not in [that particular field], then you are of a lower caste. But it is not evident in daily life. It is difficult to explain. But there is fierce competition and favoritism. So how fair is that?

In three cases, inequity was related to gendered practices in the community (to favor male students).

> The nasty experiences are related to a project in which I was the only female person. I felt it especially in the beginning of the project. Sometimes people are shy, and they don't want to look you in the eye, but the male professors targeted me with their words, and they didn't even look at me. It didn't feel very nice. They sort of externalised me, even though I was present, and they talked about me and the work that I had done as though I wasn't even there.

Another student described being the only woman on the research team and how she had difficulties asserting herself and being taken seriously by the men. She found the situation problematic and wished that she had a female mentor to support her.

> You get the feeling that is this how I am being shunted aside. Like parents and children. Like when parents make children do something by manipulating their feelings. There is something similar here, which is really irritating, because I am a grown-up. I look younger than my age and my style is youthful, and I am female. I've encountered, especially with older men, an inability to take me seriously. My supervisor isn't usually guilty of this, except once in a while, but I've felt that it's awkward. I've also experienced this in teaching. So you can say that gender has been an issue for me. . . . All the professors with whom I cooperate are male, which is a bit strange. It would be nice to have one female supervisor.

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Two students found that there were unclear rules regarding the basis for assigning authorship to supervisors and colleagues and that in general, article writing required "elbow tactics."

> I enjoy doing the research much more than writing the results. Maybe it's a bit challenging. And you have to use your elbows and stand up to others. Maybe I'm not so good at that.

DISCUSSION AND CONCLUSIONS

Methodological Reflection

In this study, semistructured interview data were collected to identify ethical problems that emerged in doctoral studies. Hence, the aim was to explore the kinds of ethical problems doctoral students face in the context of supervision. The reflective and process-orientated research design gave the doctoral students the opportunity to reflect on various aspects of their studies and gave the researchers an opportunity to explore the nature of the ethical problems faced by the students.

Because of the distinctive features of the two disciplines studied (the natural sciences and the behavioral sciences; cf. Lindblom-Ylänne, Trigwell, Nevgi, & Ashwin, 2006; McCune & Hounsell, 2005) and the limited sample size, generalizing the results to other disciplines and other countries should be done with caution. Nevertheless, the semistructured interviews provided rich data for identifying and analyzing ethical issues and allowed the exploration of ethical problems embedded in a variety of formal and informal supervisory activities. Hence, these findings have transferability to further studies on the ethical problems embedded in doctoral supervision. Further support for the transferability of these findings is provided by the fact that we were able successfully to apply to our data a rather universal theoretical conceptualisation, namely, Kitchener's (1985, 2000) model of ethical issues in counselling/advisory relationships.

Reflections on the Findings

Our results showed that the most common types of ethical issue faced by the doctoral students included compromises of beneficence (approximately one third of all ethical issues) and especially threats to student well-being. This confirms previous findings that have suggested that doctoral students experience significant amounts of distress in the course of their studies (cf. Hyun et al., 2007; Kurtz-Costes et al., 2006). Students' well-being was not, however, explicitly threatened by their supervisors; rather, it was a question of handling stress and dealing with the pressures of PhD work. The problems threatening well-being arose from lack of an understanding attitude towards the students' situations and from problems in discussing life situations with their supervisors. Students often recognized that they needed moral support in order to preserve their psychological well-being but were often unable to identify where they could receive such support.

One fourth of all ethical issues pertained to fidelity, especially supervision abandonment or inadequate supervision. Students had solved these problems by turning to other senior members in the research community, but unfortunately the students were often left without proper supervision. Supervision abandonment emphasises the role of the research community. Hence, peers, postdocs, and other senior members of the scholarly community provide an important

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supervisory resource. However, it would also be important to think of ways to recognize and reward supervision efforts in favor of the collective good of the research community overall.

Slightly less than one fifth of the ethical issues pertained to compromises in nonmaleficence. Experiences of exploitation were relatively common. Students felt that they had to overwork and perform tasks that were not part of their doctoral studies or their appointed roles in research projects: Consequently, they were delayed in finishing their dissertations. While delaying progress and thus being a potential concern, assistantships and project obligations might also reflect the accumulation of academic experience that could give the student an advantage in the postdoctoral period (Anderson & Swazey, 1998). However, the average time for completing the doctoral degree in Finland is 5 to 6 years in the natural sciences and as much as 7 to 10 years in the behavioral sciences (Sainio, 2010). The fact that the completion times are relatively long indicates that there may be problems in measuring the time spans for doctoral work. To avoid exploitation, it would be important for supervisors to be clear about what tasks are included in the doctoral work and why these tasks are necessary. When these are explicitly discussed with the student, the supervisor will need to justify the tasks so that the student understands why these tasks are a necessary or important part of the studies or the doctoral process.

There were also descriptions in the data of situations that can only be described as abusive. Abusive supervision springs from a desire to punish the students, for instance, for their lack of skill and experience in the field (Goodyear et al., 1992). Abusive supervision is a problematic point of departure, because the relationship between a supervisor and a supervisee is, by definition, a relationship of someone with more knowledge and experience in a research field supporting and assisting someone who is less experienced. If such a situation is problematic for a supervisor, then he or she should carefully consider its requirements before agreeing to supervise. In an optimal situation, supervisors would recognize the reciprocal nature of supervision and the various ways in which the two parties can contribute to each other's learning and development. Furthermore, there were blatant examples of misappropriation of student work. There can be no excuse for outright theft. Among all those students in our data who had experienced misappropriation of their work, the incident had triggered ethical thinking, and they took the events very seriously. However, exposure to misappropriation could potentially signal to students that such behavior is acceptable and without consequences (McCabe, 1993).

The milder cases of unclear rules for assignment of authorship were categorised as compromises of justice, that is, the failure to give due credit. Compromises in justice also included inequity, some of which was gender related and some was related to disciplinary background. Gendered or in other ways unequal practices hurt persons in a weaker power position the most and can place them in an even more disadvantaged position. Although such practices appear in encounters between individuals, they might also reveal something about the unspoken rules or norms of the research community (Löfström & Pyhältö, 2102). Individuals might feel powerless to influence a situation, because that would require changing the very thing that places them in an inferior position in the first place, namely, a certain disciplinary background or gender. As a strategy for dealing with the experiences, one student sought to join forces with other female colleagues in the research community, one possible step toward the collective acknowledgment of a problem. To end inequality, it must be first exposed. Gaining support from people who are in positions of power can greatly help to eliminate the problem. Once problems have been exposed, tolerance might be a key factor in subsequent steps to promote equality. People who work in educational settings can be expected to learn and apply ethical codes to guide the

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work in such settings. Thus, a supervisor's duties include ensuring equity and fairness; in other words, supervisors are expected to have tolerance and to promote tolerance (Brabeck et al., 2000). Tolerance does not mean that people are expected to change their belief system but rather to behave according to ethical codes of conduct; although change is important, Brabeck and colleagues (2000) argued that promoting tolerance sets up standards of fairness in a more immediate and faster way than if we waited for all people to change their core beliefs.

Autonomy-related issues included intrusion of a supervisor's views on the student's work and a narrowness of the perspective that is permitted for dissertation work. It is impossible to develop one's own researcher identity and independence and act as an autonomous agent if there is no opportunity to discuss different perspectives and values. In our data, the supervisor views were related to specific theoretical or methodological approaches, but they also seemed to imply a certain set of underlying values that were imposed on the students. Goodyear, Crego, and Johnston (1992) observed that there is "a fine line between merely sharing those values and actively imposing them on students" (p. 205). If the students feel that they have no choice but to adopt the supervisor's views, then the situation is a matter of intrusion of views or imposition of values. Ideally, supervisors would make clear their strongly held viewpoints, and students would have the freedom within their research communities not to work with supervisors whose viewpoints strongly conflict with their own—and be able to do so without fear of sanctions (Goodyear et al., 1992).

We identified different trends in ethical problems in supervision experienced by doctoral students in the behavioral sciences as compared with those in the natural sciences. Compared to other ethical issues, exploitation, inequity, and abandonment were relatively frequent among students in the natural sciences. The experiences of exploitation could be related to the fact that the students usually work in teams with many supervisors overseeing them and carry out several projects simultaneously. Sometimes the boundaries of who is supervising whom and who participates in what projects may be unclear. Consequently, problems may arise in the distribution of work among doctoral students (cf. Löfström & Pyhältö, 2012). The quest for equity could be a reaction to experiences of exploitation.

The array of ethical issues in the behavioral sciences was broader and could be a direct consequence of the fact that this subsample was three times that of the natural science students. However, we identified a slightly greater number of ethical issues per student in the interviews of the students in the behavioral sciences. Issues included compromises of autonomy, inequity, threats to well-being, lack of a collective culture, and inadequate supervision. In the social sciences in general, the convention is for the student to approach a supervisor with whom they would like to work. By the time the students apply for doctoral studies, they must have the support and commitment of a supervisor who is ready to work with them in order to be accepted into a program. Much is vested in the individual relationship between supervisor and supervisee. The lack of a collective culture and the threats to student well-being may be the reflections of a working culture that emphasizes the role of individuals. Also inadequacy of supervision is likely to emerge in a more pronounced way in this kind of working culture. If the research community views supervision as an individual relationship and as an individual matter, then it will be very difficult to intervene in the supervision of colleagues, which in turn might contribute to preserving malpractice, such as the intrusion of a supervisor's views, abuse, and misappropriation. This might help to explain the slightly higher relative frequency of ethical issues in the interviews of the students in the behavioral sciences.

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Concluding Remarks

In our data, many of the ethical problems appear to be the result of poor supervision. It is understandable that in the student interviews the ethical problems are manifested in individual relationships because the students see their supervisor as the key person who enables or hinders the doctoral process. As a point of departure, students have great trust in the supervisor and generally rely heavily on their supervisors. The supervisor is often the student's primary connection to the research community, when in fact it would be more fruitful if the community as a whole would be seen as a central agent in the supervision. Some students recognized the potential in the community and utilized more experienced colleagues and senior researchers in fruitful cooperation, but if the students are not well integrated into the community, then the role of the supervisor is even more important. Ethical problems become evident in the individual supervisor–student relationships, but often there are cultural and community-related problems in the background. Further research, especially utilizing comparative designs, is needed to examine whether supervisors and doctoral students identify similar ethical problems or whether these are perceived differently, and further how each group solves these problems. Finally, some of the issues identified, such as plagiarism and misappropriation, are violations of the ethical guidelines that all Finnish universities are committed to (i.e., Finnish Advisory Board on Research Integrity, 2012). Many of the problems identified can be interpreted as compromises of integrity and openness, which are two key components of the Finnish ethical guidelines (cf. Godecharle et al., 2013). Our study shows that despite nationally agreed ethical guidelines, explicated ethical expectations, and institutional commitment, violations can take place within the formal academic structures, including supervision. To expose these violations, research on the experiences of various groups of individuals and bringing the nature of these violations to the attention of the academic community is necessary. Although most supervisors are likely to be aware of the common ethical guidelines and supervise their doctoral students with the highest levels of integrity, efforts are needed to assure that all supervisors find the moral motivation to adhere to the guidelines in practice. One away to increase the moral motivation could be, as we have argued earlier, to expose highly individualized practices to the broader academic community and make doctoral supervision a common concern for all involved in this endeavor.

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