Ruth Healey University of Chester, UK

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Ethical thinking in a disciplinary context: the ethical development of undergraduates and expectations of tutors in the arts, social and pure sciences

"Educators need to give greater attention to the teaching of ... ethics as part of our contribution to the education of responsible citizens." (Hay & Foley 1998: 169)

Globally an interest in teaching students to think ethically has increased (Barnett & Brown 1994; Hay & Foley 1998; Matthews 2012). This focus on ethics is reflected in attempts to identify distinctive characteristics of university graduates (Barrie 2004; 2006; 2007). Barrie (2004) has identified 'Ethical, Social and Professional Understanding' as one of five key graduate attributes. This attribute means that "graduates of the university will hold personal values and beliefs consistent with their role as responsible members of local, national, international and professional communities" (Barrie 2004: 270). This graduate attribute relates to the need to prepare students for 'supercomplexity', where "the very frameworks by which we orientate ourselves to the world are themselves contested" (Barnett 2000: 257).

Healey et al. (2011) argue that learning to think through ethical issues develops critical thinking skills for dealing with supercomplexity. Ethical issues are an example of supercomplexity, as the frameworks the students use to consider ethical issues are both contested and likely to change. In increasingly dynamic professional and social lives, graduates need these skills to enable them to negotiate an uncertain world. Yet, Boyd et al. (2008: 38) question whether graduates are leaving university prepared "for practical and ethical engagement with their scholarly, professional and personal worlds." Moreover, we might expect differences in ethical thinking between disciplines given that the nature of ethical issues studied varies by discipline (Lane & Schaupp 1989; Rooy & Pollard 2002). For example, the ethical issues pure scientists face when testing on human subjects or undertaking animal experiments are of a different nature from those dealt with by social scientists when interviewing or observing people, or those explored in literature when deciding whether a character made the appropriate ethical choice. However, in terms of critical thinking, many ethical issues are multidisciplinary in nature, for example assisted suicide may be studied from many different disciplinary perspectives, yet the ways in which students might approach and think about such a topic may differ between disciplines. Science students may analyse the issue from the perspective of the medical issues of the individual body, whereas social scientists may consider the implications of assisted suicide for broader society.

For disciplines which involve primary research with animals or people, for many students their main contact with ethics relates primarily to the ethics of undertaking research (Boyd *et al.* 2008). Students are carefully guided through the process of seeking ethical approval

for projects, especially students on accredited courses which have prescribed ethical standards (e.g. British Psychological Society courses). Going through ethical clearance procedures has in many cases become relatively mechanistic, after which students may give ethics little further consideration. However, in terms of a graduate attribute, ethics is more concerned with developing individuals to have the broader skill of *thinking* ethically in all parts of their lives, not just in research.

This research had three aims: a) to assess whether the ethical development of undergraduate students varies by discipline, gender and year; b) to analyse how the nature of ethical thinking expected by tutors varies between disciplines and evaluate the extent to which this aligns with the students' ethical development; and c) to discuss the implications for enhancing the teaching and learning of ethics. To address these aims, a questionnaire exploring students' ethical understandings and level of ethical development, was given to students in all three undergraduate years of the English (art), Geography (social science) and Animal Behaviour and Welfare (pure science) programmes at an English University. In total 335 students responded. Interviews were then conducted with tutors teaching on the three programmes discussing the nature of ethics within their disciplines, how ethics was taught and what ethical thinking skills they wanted their students to develop.

The key findings were as follows: 1) There were no significant differences between disciplines in terms of student ethical development. 2) There was some evidence of differences between years, but there was not clear evidence of progression over the three years of the undergraduate programme. 3) Male students demonstrated less ethical development than their female counterparts. 4) Tutors across all three disciplines had similar expectations in terms of the nature of ethical thinking desired; these ethical skills were strongly related to generic higher education skills. 5) Reflecting on the findings from the tutors and students, this research highlighted how tutors' expectations of the type ethical thinking of students did not correlate with the development demonstrated by the students in the questionnaire. The types of thinking tutors expected were the weakest elements in the questionnaire findings.

The findings demonstrated the importance of the nuances and disciplinary specificity of addressing ethics. It is essential that in reconsidering the approach to teaching ethics that these disciplinary nuances are not lost, as this is where the main interest lies for the students (Pace & Middendorf 2004). Drawing upon the ideas of threshold concepts (Land et al. 2008) and troublesome knowledge (Perkins 2006) it is suggested that in order to engage students in ethics, the skill of 'ethical thinking' should be included in programme outcomes. By embedding ethics through active, social and creative learning within the current disciplinary content, students have the opportunity to learn that ethics is part of the discipline and offer them the best potential to enhance their ethical thinking abilities.

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